

# THE LONDON SATURDAY JOURNAL.

PUBLISHED BY WILLIAM SMITH, 113, FLEET STREET.

No. XVIII.

SATURDAY, MAY 4, 1839.

[PRICE TWOPENCE.]

## THE BRITISH NAVY.

NO. VII.

### THE ARMAMENT OF A SEVENTY-FOUR GUN SHIP.

"With roomy decks, and guns of mighty strength,  
Whose low-laid mouths each mounting billow laves,  
Deep in her draught, and warlike in her length,  
She seems a sea-wasp flying o'er the waves."—DRYDEN.

BEFORE entering on a general description of the ship's armament, it will be proper to explain, once for all, the meaning of the popular terms used in gunnery, in order to enable the uninitiated reader to understand their application on this and other occasions, when the mention of them may occur in the course of these papers.

GUNS are the ordnance with which ships are armed; they are never called cannon or artillery, neither are the missiles projected therefrom called cannon-balls: such terms are not to be found in the seaman's vocabulary.

Guns vary very much in length, weight, and calibre, and somewhat in form, but in the latter respect they all approach to the shape of a cone, the largest and strongest part being the breech, near to which the gunpowder in exploding exerts the greatest force, and gradually tapering until the charge is ejected at the muzzle. It may be therefore laid down as a general rule, that a cone is the most perfect form for a piece of ordnance, and that raised rings, swell muzzles, or ornaments, add to the weight, and but little to the strength or utility of a gun; being only useful for affording facilities in lashing or securing it, and often adopted for no other purpose than to improve the symmetry of its appearance. All ships' cannon are therefore called indifferently *guns*, except *CARRONADES*\*, another sort of ordnance, differing in many essential properties, being short pieces of large calibre, and comparatively light weight, calculated for the upper decks of ships, or the general armament of small vessels, which are not of sufficient stability to sustain heavy guns. The carronade was designed by the late Mr. Millar of Dalswinton, and introduced by his friend General Melville, about the year 1779. They take their name from the Carron iron-works in Stirlingshire, where they were originally cast, and where all the iron ordnance used by Government is now manufactured.

The term *SHOT* is used indifferently for every species of missile, distinguished as round shot, grape shot, canister shot, double-headed shot, and chain shot, which latter has been discontinued in the British service for many years, but is still used by foreigners. *Round shot* is as nearly spherical as it can be produced by casting, as its name implies. *Grape shot* is composed of a number of

iron balls bound together, somewhat in the form of a bunch of grapes. *Canister shot* is a lot of still smaller iron balls inclosed in a tin case or canister, and the double-headed shot is a casting of two half spheroids connected by a strong iron bar, and used for firing at masts and rigging, for the purpose of dismantling an opponent. The size and weight of the materials composing each of these, we shall presently describe.

And first of the guns. The form of those in general use, as well as the carriages on which they are mounted, is pretty accurately represented by the small brass cannon exhibited in toy-shops. Before being turned out of the lathe, after boring, the piece is lined by the workmen into four equal divisions, and a notch cut at the breech and muzzle, to denote the quarterings; this is done to assist the marksman in taking aim. By casting the eye along the side notches, and bringing these to bear upon the object aimed at, the height or *elevation* is ascertained, but not the *direction*; for the piece being conical, such line is not parallel to the axis, but converging thereto; it therefore becomes necessary to take another view along the *top* of the gun\*, and bring the notches to bear on the object for direction, so that in fact two operations are required to point the gun.

Now, to the artilleryman, who practises upon dry land, and whose platform is immovable, this is not very material; because, after he has once taken his elevation, he may dispense with any further trouble on that account as long as the object fired at is stationary, or not materially increasing or diminishing its distance; but to the sea gunner, whose platform, being the ship's deck, is constantly undulated by the motion of the waves, or inclined more or less according to the force of the wind, this double operation is perplexing in the extreme. When he has secured the elevation, and fixed his quoin (a species of wedge) under the breech of the gun, he finds that the ship's rapid motion, or an alteration of her line of progress, has made a considerable deviation in his line of direction; and when that is adjusted by training the piece, a look at the side notches will convince him that the elevation must be again amended: and thus considerable time is lost in the fruitless endeavour to accomplish both matters, so that very often the gun is fired at random, and the shot thrown away.

It is remarkable that so obvious an impediment as this presented to gun-practice at sea, was never remedied until nearly the close of last war, particularly as the means for doing so were palpably simple, and had been, in fact, promulgated by Robins in a paper entitled, "On pointing or directing of Cannon to strike distant Objects," published in his "Mathematic Tracts" in 1761. Indeed, so far back as 1731, the manner of obviating this impediment, produced by the conical form of a gun, is recommended in "Gray's Treatise of Gunnery," in the following words:—"But when the object is so near that you can take aim (which always happens in firing point-blank, or in battering walls) you need only dispart your piece, by fixing notched sticks, or something of that kind, on its muzzle or trunnion rings, and of such lengths

\* When carronades were first cast, they were all of sixty-eight pounder calibre, and called *smashers*. One of the first ships armed with them was the *Rainbow*, and afterwards the *Glatton*, 50, Captain, now Admiral, Sir Henry Trollope, who, at his pressing request, was permitted to substitute smashers for the eighteen-pounder long guns on the lower deck of those ships. Their superiority was established shortly afterwards, when in the first ship he captured a French frigate, and in the *Glatton* beat off six French vessels that had purposely come out of the Texel, anticipating the easy capture of the British ship. Carronades were adopted in the navy about the year 1792, after a tedious correspondence between the Boards of Admiralty and Ordnance.

\* This view along the notches on the top of the gun is called the "*The Line of Metal*." When adopted it gives an elevation more or less according to the difference in diameter between the breech and the muzzle.

(heights) as to equal the gun's thickness at the base ring." Again: "Some sort of rule might also be contrived for directing guns in sea engagements, such as viewing by sights raised, on ordnance, to a just height near the trunnion and muzzle rings. If a sea gunner would accustom himself to use them on all occasions, and had capacity enough to make reasonable allowances, he would find them of very great service in time of action."

Notwithstanding all this, the generality of naval officers—we may say the whole, with the exception of the present Admiral Sir P. Vere Brooke\*, then captain of the Shannon frigate, and Sir John Pechell†, commanding the St. Domingo about the close of last war—were either ignorant, or entirely disregarded this essential point; which is the more remarkable, as many were educated in the Naval College at Portsmouth, an institution established expressly for the purpose of affording to cadets the instruction adapted for their profession, and where both the theory and practice of gunnery were taught.

The gun is fixed upon its carriage, or rather laid thereon, being suspended by two strong projecting pieces near the balance of its centre, denominated trunnions, and these are covered over with iron patches called cap-squares, secured by forelocks; the piece is thus at liberty to be oscillated with slight exertion, and to have its extremities raised or depressed at pleasure; this is performed at the breech by means of quoins or wedges sliding upon a bed of wood, which latter may be removed to lower the breech to the greatest extent, and elevate the muzzle as far as the port-hole will admit.

The carriage is formed of strong side-pieces of elm called brackets, which are bolted to oaken axle-trees, resting on wooden trucks, for the convenience of moving the whole back and fore. The gun is discharged by means of a lock screwed on to the side of a vent-patch near the touch-hole, and its recoil is limited by a stout piece of rope called a breechen, which is rove through a ring at the breech, the ends being secured to bolts on each side of the port-hole. The gun is moved (or run, as it is called,) in or out of the port by means of tackles, and more nicely adjusted by direction of the captain of the gun (the marksman) by handspikes: the process of loading, pointing, firing, spunging, &c., we shall describe under the head "Exercise."

Ships are rated according to their size and complement of men, but third-rates, such as we are describing, are denominated 70's, 72's, 74's, 76's, or 78's, (eighty-gun ships are second-rates,) according to the actual number of cannon mounted. The following is the regulation:—

"The ships and vessels of her Majesty's fleet shall be established with such proportion, and nature of ordnance, as the Lords Commissioners of the Admiralty may from time to time direct, in pursuance of such regulations as her Majesty may make in that behalf.

"Although her Majesty's ships and vessels are rated according to their complements, they shall be denominated as to their ordnance, according to the number of guns and carronades which they actually carry."—*Naval Instructions*, p. 2.

During the last war, it was the custom to distinguish ships, and to rate them in classes, as follows:—120's, 100's, 98's, 84's, 80's, 74's, 64's, 50's, 38's, 36's, 32's, and so on; and the ships always carried several (sometimes 15 or 20) more guns than were thus expressed; but such a practice afforded no clue to the real force of the ship. In foreign navies the plan is still continued, and some of the American rated 76's carry upwards of 100 guns.

Since these papers were commenced, a new scale of armament has been promulgated by the Lords of the Admiralty, to be henceforth adopted in all her Majesty's ships. It is a very great improvement, assimilating as nearly as possible the calibre on all the decks, and giving to every vessel some guns capable of discharging shells horizontally. We shall hereafter refer particularly to this alteration, and the improvement it is calculated to effect; but for the present confine our description to the old armament, upon which the calculations we have already set forth, as to weights, &c., are founded.

Our vessel, as we have already stated in our Fifth Article, ("LONDON SATURDAY JOURNAL," No. XII.,) mounts exactly 74

\* The officer who captured the American frigate, Chesapeake, in such gallant style; an exploit to be attributed to the care with which he had trained his crew to the practice of gunnery. A single broadside threw the enemy into confusion, killed or wounded the principal officers, drove the men from their quarters, and enabled him to carry her, by boarding, in fifteen minutes.

† This officer published a small tract in 1814, giving ample directions on this and some other important points of practical sea gunnery.

guns, and is therefore denominated a seventy-four gun ship. The principal battery is on the lower deck, and, as the whole twenty-eight pieces of ordnance there arranged are precisely alike, a description of one will suffice.

The length of these pieces is nine feet and a half, their weight between fifty-five and fifty-six cwt.; they cannot be cast of exactly the same weight, and therefore, roundly speaking, they are estimated at the latter sum. The carriage weighs eight cwt. one qr. six lbs.; the rope, blocks, and other matters connected with it, weigh above one cwt. more, so that altogether the mounted gun may be taken at sixty-five cwt. The distance charge used for the longest range, with a single shot, is one-third the weight of the latter, or ten lbs. eleven oz. of coarse-grained powder, and this is inclosed in a flannel bag, called a cartridge\*, tied at the end, and also in the middle, to preserve its oblong shape. For decreased distance and close quarters the charge is diminished to six lbs., and when double shooting with two round shot, or a round and grape shot (a favourite charge), to four lbs. This gun is capable of projecting two shot through the sides of a ship of equal force when within point blank distance. The various duties of the thirteen men and a boy, which compose the crew of this gun, we shall describe under "Exercise."

The length to which a long thirty-two pounder recoils upon a level platform has been ascertained to be eight feet, but as this is inconvenient, and moreover unnecessary, because no more recoil is required than just sufficient to bring the muzzle within the port-hole, for the greater facility of loading, it is limited to the extent of between three and four feet by the breechen, a stout rope, eight inches in circumference, the strain upon which is very considerable when the gun gets warm, for it then recoils with greater violence†, and the force is increased when the platform becomes inclined by the heel of the ship, when fired from the weather side. The range of the thirty-two pounder, with a full charge, and point blank, single shot, is about three hundred and fifty yards. By elevating the gun to the greatest extent that the port-hole will admit (about eleven degrees), it is increased to two thousand five hundred yards‡, and at one thousand yards very good practice, as it is called, may be made; that is, the shot directed by a skilful marksman within the rim of a target, eight or ten feet square, with one degree or a little more of elevation.

The grape (never used but at close quarters, for they will not penetrate the sides of stout ships,) are formed of nine cast balls of three lbs., covered with painted canvas, and tied round a spike having an iron bottom of the calibre of the piece; the weight is thirty-four lbs. one oz.; the lashing is torn away by the explosion of the powder, and they spread as they leave the gun, proving highly destructive in cutting the masts, sails, and rigging, penetrating the sides of small vessels, or against boats.

Canister shot, for thirty-two pounders, consist of seventy iron balls of eight oz. inclosed in a tin case, and they are used against men or boats unsheltered, or against troops; and for this purpose bags of musket-balls, six hundred in a bag, are also used, which being fired from a broadside of guns, produce a shower of destruction fatal to all within its reach. The double-headed shot will range with tolerable accuracy up to six hundred or seven hundred yards, but not to penetrate a ship's side, and they are generally directed at the masts and rigging. So much for the lower battery: the next, upon the main deck, is composed of thirty long eighteen-pounders, and these guns, although not much inferior in their range, are greatly so in their effect, on account of the reduced weight of the missile, it being a law in projectiles that, with proportionate charges, and the same elevation and windage—the resistance of the air to bodies passing through it, is as the squares of their diameters, but the weight of the bodies, or power to overcome such resistance, increases with their density, being as the cubes of their diameters. Heavy missiles (their form being alike)

\* Formerly strong paper cartridges were used with flannel bottoms; the adoption of entire flannel is a great improvement, not being so liable to tear and to spill the powder, or to leave ignited fragments in the gun when discharged.

† No satisfactory reason has ever been shown why a cannon or any other piece of ordnance should recoil with greater violence, and consequently project the shot with greater force, when it becomes heated. Some have attributed this to the warmth of the metal acting upon the powder, and making it stronger; but guns are discharged so rapidly that such effect must be very small, and insufficient to produce the effect.

‡ In situations where the gun can be elevated up to forty-five degrees, a much longer range might be obtained, probably little short of three miles, there are many cases on record where shot have been projected to that distance; but their force is then spent.

will also penetrate deeper, for shot not only penetrate in proportion to their diameter, but as the squares of their velocities. The advantage of larger calibre moreover descends to the grape, canister, &c., all which are composed of heavier materials.

The eighteen-pounders on the main deck battery are nine feet long, and forty cwt. Their distance charge of powder is six lbs., gradually reduced to four lbs., the lowest three lbs. The carriage is six cwt., and the tackling, breeching, &c., about one cwt., making altogether forty-seven cwt. The recoil (about six feet six inches on a level platform) is regulated on the same principle as already described, the circumference of the breechen to sustain the shock being five and a half inches, and this is often broken, or the bolts that secure it to the ship's side drawn out, by the violence of the recoil. The grape for these guns is composed of balls of one lb. eight oz., and weighs nearly sixteen lbs. The canister contains forty-two balls of six oz., and the bag of musket-balls about four hundred. The range of 18's, 24's, and 32's, not varying very much, is generally taken under one head, called the range of *long guns*. The crew of the eighteen-pounder consists of ten men and a boy. We next arrive at the two nine-pounders on the fore-castle; these are eight and a half feet long, and weigh twenty-three cwt. one qtr. The full charge is three lbs. of powder, reduced to two lbs. four oz., the lowest one lb. eight oz. The windage of these and the other long guns, already described, being great, is the reason for such large charges of powder, for a considerable portion of its expansive force is wasted by passing off around the sides of the shot. The carriage of the nine-pounder weighs four cwt., and the breechen is four and a half inches, weighing with the tackles about half a cwt.; being altogether about twenty-eight cwt. The capacity of this gun is much less than the heavier ones below, and its range smaller, for the reasons already explained; it is principally used for firing at suspicious vessels when in chase, to oblige them to heave-to (stop) to undergo an examination. The balls in the grape-shot for the nine-pounder weigh thirteen oz., and the whole complete seven lbs. six oz. The canister contains forty-four of three oz., and the bag of musket-balls about two hundred. The crew of the nine-pounder consists of eight men and a boy.

The seven carronades on each side of the quarter-deck are of thirty-two pounder calibre, four feet long, and weighing seventeen cwt. The full charge is one-twelfth of the shot's weight, or two lbs. ten oz.; the immense difference between this and ten lbs. eleven oz., the full charge of the long gun, is, first, on account of the smaller windage, and secondly, that these pieces are not designed to act at long ranges, but principally for close quarters, when, owing to their great calibre, they are much more destructive than long guns, for a long gun of this weight would only take a shot of six lbs.

Carronades are not mounted on carriages like guns, but on slides, weighing six cwt. two qtrs. fourteen lbs., on these they are worked, with great facility and quickness, by seven men and a boy; and, when not in use, these slides are so arranged as to take up but little space across the deck. The point blank range of a thirty-two pounder carronade is two hundred and fifty yards, and its long range, at five degrees elevation, one thousand yards, which is about the range of a long gun, with one degree of elevation only; giving the latter a far greater facility of aiming correctly in distant firing. There is no specified reduced charge for this piece, but the charge is generally reduced as the gun warms, and sometimes it is loaded with two shots, which is a dangerous practice, and strains the tackling and ship's side. As this gun has but a small recoil, its breeching is very stout, being nine inches in circumference, notwithstanding which it is frequently broken. The shot of different sorts used for carronades, are precisely similar to those fired from the long guns.

Having now described the nature and capability of the artillery on board, we shall enumerate the various weapons supplied for the use of the boarders, and small-armed men, postponing the manner of distributing them to be described under the head of "Exercise." Over and above the muskets of the marines, one to each individual, one hundred muskets and bayonets, with cartridge-boxes, &c., complete, are allowed for arming the seamen. These are somewhat lighter than soldiers' muskets, being only eleven lbs. four oz. Besides these, there are seventy pairs of pistols, weighing six lbs. eight oz. per pair, two hundred cutlasses about five lbs. each, one hundred boarding-pikes, seven feet long, weighing four lbs., and sixty pole-axes, or tomahawks, weighing seven lbs. each. Seven thousand musket-ball cartridges, and two thousand pistol ditto, are supplied for the above, with some casks

of fine powder, and several cwt. of lead, for making more, when these are exhausted.

When the reader becomes acquainted with the imposing force which a ship possesses, not only as regards her artillery, but capable of being detached under cover of her guns, or, if need be, to a considerable distance, he will the more fully appreciate the value of fleets, which contain within themselves the elements for successful attacks upon places that are not strongly fortified; and it will also account for the conquests we have made and retained by our naval supremacy, in all parts of the world. An old author has truly remarked, that "he who commands the sea will always be obeyed on shore;" and it is a fact, that, in the year 1747, the Dutch, with a squadron of ships, and 4000 troops on board, alarmed the whole coast of France, giving employment to full 100,000 soldiers, who were marched and countermarched from point to point, and harassed extremely, whilst the squadron sailed alongshore, now threatening one position and now another. But the estimation in which a ship of war should be considered, is more strongly portrayed by Monsieur Dupin, than in any language that we can express it; we shall therefore give a translation of his words. "If we would appreciate the real force of a ship of war, we must not say a ship is in battle a floating battery, with which we can securely kill or wound more than a fourth, or a fifth, or a tenth of the seamen of another ship of equal force. We should say a modern ship of war is a floating battery, which can only be compelled to yield to batteries of the same description. It is a fortress which is able to resist the sea, in all seasons, in the midst of every tempest. It is a fortress which transports itself with a rapidity infinitely superior to that of the lightest troops of a land army, in such a way, as to run over a fourth part of the great circle of the globe in less time than a continental army can pass from Spain to Poland, or from France to Russia. Now, when such immense marches are undertaken, the naval army experiences neither fatigues, nor privations, nor wants, nor the epidemics which destroy so many land armies. Without accident to her crew a ship of war passes the winter in the midst of the polar ice, in a degree of cold exceeding that which caused the destruction of the finest army that modern times have seen. In short, a naval force not only transports itself, exempt from suffering and fatigue, it also transports the land army, and communicates to it its own movements. By means of it the powers who have only a small number of soldiers, are enabled to multiply them by sudden and unexpected disembarkations, on the vulnerable points of an enemy's coast."

#### EXPLANATION OF SOME TERMS IN NAUTICAL GUNNERY.

**WRIGHT OF METAL** signifies the weight of iron which the whole of the guns are capable of projecting at one round from both sides, when single shot.

**BROADSIDE WEIGHT OF METAL** means the same discharged from one side only, and in large ships amounts to just half of the former. In open vessels, armed with guns on circular sweeps, which traverse all around, and can be discharged on either side, the weight of metal is included in *both* broadsides. In short, *broadside weight of metal* means the weight that can be projected from one side.

**CALIBRE**, or caliber, is the diameter of the bore or barrel, and also the diameter of the shot. Thus we speak of a "ship's calibre" by the known weight which her armament represents.

	In. dec. pts.
The calibre of an 84-pounder is	10 00
—	68 8 05
—	42 6 84
—	32 6 41
—	24 5 82
—	18 5 29
—	12 4 62
—	9 4 20
—	6 3 66
—	4 3 20
—	3 3 11
—	1 2 01
—	$\frac{1}{2}$ 1 80

The reader will observe that sea ordnance is always distinguished by the above enumeration of weight, there being no such guns in the British service as 48-pounders, or 74-pounders, as frequently stated by persons palming their assumed knowledge on



the ignorant. This is one of the many touchstones by which pretension to nautical information is easily detected.

In order to afford facility in loading, the diameter of the shot is always somewhat smaller than the bore of the piece, and this difference is styled

**WINDAGE**, being usually thirty decimal parts of an inch in guns, and half that quantity in carronades, but varying materially, owing to the rusting of the shot, its inequality of surface, or malformation in the original casting.

The **AXIS** is, as its name implies, an ideal line supposed to run along the centre of the bore.

**POINT-BLANK** is a term often confounded with *horizontal*, or rather used to imply horizontal firing, but it signifies that the gun is directed straight to the object, the mark aimed at being on a plane with the axis, which may be either above or below the horizon.

**POINT-BLANK DISTANCE** is therefore no fixed measure, although it is generally implied by the space of three hundred yards, being the distance the majority of guns are capable of projecting their shot in a straight line, before the action of gravity becomes perceptible; but this space varies not only with the quality of the guns, but the amount of the charge of powder and nature of the missile.

**HORIZONTAL FIRING** presumes the gun to be discharged when the axis is parallel to the surface of the water, and when the shot will (within the point-blank distance) strike any object if not higher than the platform from which it is fired. When the distance is greater it becomes necessary to resort to

**ELEVATION**, which is attained by sinking the breech of the gun, and pointing the axis above the object, so that the shot may describe a parabola or curve (counteracting the action of gravity during its flight), and alighting upon the target. The amount of elevation necessary for the distance, which is either measured or assumed, is known by reference to tables calculated for guns and charges of all descriptions, and founded on the mean of a set of practical experiments.

**SIGHTS**, or more properly speaking, disparts, are now invariably fixed on the guns, on the top of the second reinforce ring (about the middle of the piece), in ships whose guns are discharged through port-holes. In open vessels, and steamers with heavy guns on circular sweeps, they should be placed on the top of the muzzle. Wherever placed, the height is easily obtained by measuring the gun at the breech, and the spot selected for the sight, and setting up half the difference of the diameter, which gives a line parallel with the axis of the piece at a single view, and dispenses with the necessity for referring to the side notches.

**Sights** are made further available by means of a sliding pillar, on which is engraved a scale graduated to tangents of degrees; and thus as much elevation as the carriage and the port will admit can be set whenever required, regulated by the table of ranges, the distance being measured or assumed.

The space between the graduated lines upon the sliding pillar is governed by the length between it and the dispart patch, and the scale is formed by the following rule:—Multiply the length in feet by twenty-two, the tangent of one degree to one foot being decimal twenty-two, or very nearly so; and observing this ratio the product will be the distance between each degree upon the scale, which may afterwards be graduated to half and quarter degrees.

The principle described is that known as "Miller's Sight," which is simple and as good as any, and this is the sort usually selected. The sights are fitted by workmen from the gun-wharf, but most officers take the precaution to test their accuracy by the above rule, or by constructing a mathematical figure.

#### THE BOOK OF THE WORLD.

Of this fair volume which we "World" do name,  
If we the sheets and leaves could turn with care,  
Of Him who it corrects, and did it frame,  
We clear might read the art and wisdom rare,  
Find out His power, which wildest powers doth tame,  
His providence extending everywhere;  
His justice, which proud rebels doth not spare,  
In every page, no period of the same:  
But silly we, like foolish children, rest  
Well pleas'd with colour'd vellum, leaves of gold,  
Fair dangling ribbands, leaving what is best,  
On the great writer's sense, ne'er taking hold;  
Or if by chance, we stay our minds on aught,  
It is some picture on the margin wrought.

*Drummond of Hawthornden.*

#### THE ART OF PUFFING

THE skill, ingenuity, and profound knowledge of the weaker points of human credulity brought into play in the exercise (now universal) of puffing, places it at once in the rank of an art. Indeed, it had attained that distinction seventy years ago; for Dr. Johnson writes on "The Art of Advertising" in the fortieth number of "The Idler," and says, "The trade of advertising is now so near perfection, that it is not easy to propose any improvement." But when he was congratulating the puffers of his day on the perfection to which they had brought their art, it was, in reality, only in its infancy. The man whom he mentions as advertising "a wash-ball that had the wonderful quality of giving an exquisite edge to the razor," is immeasurably surpassed by the most common-place productions of the present generation of puffers: and the vendor of "the beautifying fluid" he records "who, with a generous abhorrence of ostentation, confesses that it will not restore the bloom of fifteen to a lady of fifty," would be utterly ashamed of his modesty had he lived to witness the chemic-literary efforts of that genius whose "Macassar oil" covers bald heads with luxuriant locks, and fills newspapers with attestations of the *fact*. In short, if advertising was an art in Johnson's time, it has become, in the present day, one of the finest of the fine arts.

Resources of so high a character, and of such infinite variety, are drawn upon for the exercise of this art, that there is scarcely a branch of the sciences or a department of literature which is not employed in it. A physician, for instance, whose practice scarcely pays for the shoeing of the horses to his carriage (a puff upon wheels), writes a book upon physiology, or the measles, and may, perchance, like Byron, "wake one morning and find himself famous." An elaborate puff in a dozen volumes octavo, consisting of an English version of a Greek play, with notes, (aided by a laudatory critique in a leading review *by the same hand*), has been known to translate the translator from a lean rectory to a fat bishopric; and Mr. Robert Warren, of number thirty in the Strand, owes his celebrity and his affluence as much to the *black muses* as to the less ethereal article in which he trades; for, from the anthology he has published from time to time, may be selected epigrams better than Martial's, and lyrics equal to Moore's:—so excellent indeed, that it becomes a question whether anything that poets have sung in praise of love and war surpasses the verses which have been written to immortalise—blackening.

The grand end and aim of puffing is, of course, notoriety, and never did any invention so completely work out its object. Some men are celebrated for their greatness, either of soul or achievement; others again become celebrated (by dint of the utmost perseverance in puffing) merely for their notoriety; among the former we may number the Duke of Wellington and Lord Byron; with the latter must be classed a famous auctioneer and the proprietor of "Dalby's Carminative." Now, as to mere notoriety, there is no question but the auctioneer is nearly as well known by name to multitudes of readers as is the hero of Waterloo. Nay, even in the matter of greatness, the comparison holds good; for frequent perusals of the *hammer-man's* advertisements have convinced us that he is as great in his walk of life,—that is to say, in auctioneering—as the "great captain" is eminent in war.

Hence, we need hardly add, Dr. Johnson was quite wrong: for the trade of advertising *has* been improved upon, and so extensively, we boldly affirm, as to have reached its acme. It may be just possible some century hence to travel faster than one now does on the Birmingham railway; future voyagers *may* get to America in one week, instead of two, or lately six; and perhaps some future Watt may construct a machine to teach little children spelling, or to work out astronomical calculations, by means of cog-wheels; but the art of puffing is, we again assert, positively incapable of further improvement; for to such a pitch has it arrived, that it is impossible to eat, to drink, to walk, to ride, to dress, to read, to write, or (since the invention of the patent respirators) to breathe, without encountering a puff. *Ex. gr.* A double sheet of puffs is necessary to every Englishman's breakfast. We eat our dinners off so many vehicles for the puffs of the late respected Mr. Wedgewood. Every possible variety of beverage, from champagne to humble porter, is contained in a vessel adorned with advertisements, whether stuck on a Burgandy bottle, or engraved on a pewter pot. We cannot walk through a single street without observing that it is lined with puffs, either exhibited in shop-windows, or inscribed upon brass plates; the dead walls are plastered with puffs, and the trottoirs are paved with

them. We cannot ride in an omnibus or a cab without finding an advertisement hung up in it, or travel a few miles into the country, without encountering the persevering efforts of wall-chalkers. As to dress, we are covered all over with puffs from the crown of the head to the sole of the foot; we tread upon a shoemaker's puff carefully pasted upon the inner sole, and are filled with hatters' puffs stamped upon the lining of our beavers, or our gossamers, as the case may be; a tailor's puff is stitched under the collar of every coat, and we can't keep out the wet without advertising the house of Macintosh and Co. Then for reading: what is a book written for but to puff off either the author or the subject? Books of travels are puffs for the living; biographies puffs for the dead; poetry is the medium for the puffs of sentimentalists; and a modern novel is the vehicle of puffs for patricians, and anti-puffs for "the vulgar;" many a medical book has been written to puff a patent medicine, and many a mechanical one to recommend a favourite invention; in fact, a book is an epitome of puffs. Lastly, to prove that one cannot write without a host of puffs impeding the current of thought, we need only mention that we are at this moment scribbling with a pen having "Tanner, London," impressed upon it, and that it is fixed into a holder which heralds the ingenuity of "S. Mordan and Co.," while the maker's name is either woven into, or stamped upon, every sheet of our paper in four different places. In short, whatever we do, wherever we go; whether we stand, sit, or lie; in sickness or in health; hungry or thirsty; at home or abroad, multitudinous legions of puffs surround, envelop, and settle upon us, "thick as the leaves that strew the vales of Valombrosa."

#### CELESTINA, A SPANISH STORY, BY FLORIAN.

[Jean Pierre Claris de Florian was born of a noble family in the Cevennes, in 1755. His uncle was married to a niece of Voltaire; and, while young, Florian was taken to Ferney, and had the satisfaction of hearing Voltaire speak encouragingly of his talents. Afterwards he became page to the Duc de Penthièvre, who introduced him into the army, and otherwise befriended him. He quitted the army, and devoted himself to literature, producing, in 1783, the romance of "Galatea," in imitation of Cervantes: his mother being a Castilian, he was, by her means, familiar with the Spanish language. This work was followed by other productions; but for some time they did not attract much attention, until his fables, comedies, and short tales, made him exceedingly popular. He was imprisoned during the revolutionary period, writing, during his incarceration, the romance of "Guillaume Tell." He died in 1794.

Though Florian is deficient in power, and his "plots" are very inartificial, he is a pleasing writer, and his tales have considerable attraction for young minds. They were at one time very popular in England, in spite of the French tone of sentiment and feeling which pervade them, and which detract from their moral value. It must, however, be admitted, that Florian was a moral writer in a very immoral age; and he was a man of integrity, for he appropriated a portion of the profits of his writings to pay off family debts.]

CELESTINA, in her seventeenth year, was the first beauty of Granada. She was an orphan, and the heiress of a large fortune; and lived under the guardianship of her uncle Alonzo, an old and avaricious man, who occupied his days in counting his ducats, and his nights in silencing the serenades with which his niece was each evening entertained. He designed her for his only son Henriquez, a notorious dunce. The beauty of Celestina was so great, that almost all the young cavaliers of Granada were in love with her; and as she was never to be seen except at mass, the church which she attended was crowded with young men. Amongst these, Don Pedro, a young man of twenty, and captain in a troop of horse, was pre-eminent. Handsome, gentle, witty, the eyes of all the ladies of Granada were attracted by him, whilst among them all he saw only Celestina; and she, who could not avoid perceiving this, felt herself gradually influenced by the dumb eloquence of his eyes, and could not help replying by soft glances.

Thus passed a month, when Don Pedro found means to convey a letter to his mistress, informing her of what she already well knew. As soon as she had read this epistle, the cruel Celestina sent it back to Don Pedro in great indignation. But she had a remarkably retentive memory, and did not forget a word of what she had read, and eight days afterwards was able to give a distinct reply to every paragraph. But Don Pedro had perseverance, and Celestina had charity, and at length consented to talk to him at her window, according to the Spanish fashion, where windows are of more service by night than by day, and are the old-established meeting-places of impassioned lovers. There, when the street is deserted, the lover appears, gliding cautiously along, muffled in his

cloak, and his faithful sword in his hand. He approaches the window, defended with strong bars on the outside and shutters within. But the shutters are gently unclosed, and the lovely Spaniard appears: her trembling voice awakes the low echoes of the night in a murmured inquiry if none is waiting beneath her window; her lover answers, vows are exchanged, and even kisses pass between the envious gratings. But the day is breaking—they must part: an hour is spent in breathing forth their passionate adieus; and they separate, leaving unsaid a multitude of things most necessary to be imparted.

Celestina's window was at the back of the house, and looked upon a piece of waste ground, around which were a few poor ill-built houses belonging to the lowest class of people. Don Pedro's old nurse happened to live in a room immediately opposite to Celestina's window. This he determined to secure; he went to his nurse, and after blaming himself for having so long neglected her, he insisted on removing her to his own house. The poor woman, affected even to tears by the kindness of her foster-son, refused his offer at first; but, at length giving way, she left her old apartments to his care, and was installed at Don Pedro's house.

Never was king more happy at taking possession of a throne, than was Don Pedro when he found himself installed in the miserable apartment abandoned by his nurse. He spent the day in watching the movements of his mistress, and the night in conversing beneath her window; but this happiness was suddenly interrupted by the arrival of Henriquez, the intended husband of Celestina, who made his appearance bearing in his hand a declaration of love, written for him in Latin by his tutor.

That night an earnest consultation was held at the window, and meantime the contract of marriage was in preparation, and the marriage-day was fixed. A flight to Portugal was determined on as the only means to avoid so direful a catastrophe, and it was settled that they should get married as soon as they should reach Lisbon, and make terms with her guardian afterwards. Celestina was to provide herself with a casket of jewels which had been left her by her mother; this was of considerable value, and on its proceeds they were to support themselves until their affairs were settled. Nothing was needed but the key of the grating, which Celestina undertook to procure. Eleven o'clock the next night was fixed for the escape. Pedro was to provide horses outside the gates, and was to meet Celestina at that hour, assist her in her descent, and fly with her to Portugal. Never was there a better-planned elopement.

Don Pedro employed all the next day in making preparations for his departure. Celestina arranged and re-arranged her jewel-box twenty times over, and was particularly careful not to forget a beautiful emerald which her lover had presented to her. Celestina and her casket were quite ready by eight o'clock, and it was not quite ten when Pedro, who had sent his carriage forward, approached the rendezvous.

As he drew near, he heard a voice calling for help, and perceived two men attacked by five bravos, who, armed with swords and bludgeons, were on the point of overpowering them. Pedro's natural bravery would not allow him to leave the weaker party undefended: he drew his sword and rushed to their assistance; he quickly wounded two of the assailants, and the others took to flight. What was his surprise in recognising in the men he had preserved no others than Don Alonzo and his son Henriquez! The young cavaliers of the town who were enamoured of Celestina, and were aware that she was about to be married to Henriquez, had been base enough to hire assassins to destroy him; and, but for the bravery of Don Pedro, would have succeeded in their design. Pedro did his best to disembarass himself from their acknowledgments, but Henriquez, who prided himself on having acquired politeness at Salamanca, insisted on carrying him home and keeping him there all night. Pedro was in despair, for the clock had already struck eleven. Alas! he did not even guess the extent of his misfortune.

One of the bravos who ran from the fray, passed muffled up in his cloak beneath Celestina's window. It was a dark night; and the anxious girl, who had opened the grating, perceived him, and mistaking him for Pedro, called gently to him, and full of joy and impatience handed him the casket. "Take these diamonds, Don Pedro," she said, "and hold them for me whilst I descend." The bravo, hearing these words, eagerly snatched the casket, and made off without speaking a word; and whilst Celestina was getting out, he had already fled to a distance. What was the terror and surprise of poor Celestina when she found herself alone in the street, and could nowhere perceive him whom she had mistaken for Don Pedro! Her first idea was that he had gone forward for fear of

exciting suspicion by standing beneath the window, and she followed the way she supposed him to be gone, calling him softly as she hastened along. No answer was returned, and she was seized with terror. What should she do? Should she return to her uncle's house, or should she leave the city and endeavour to find the servants who were waiting for Don Pedro? She balanced these doubts in her mind, but could not determine. Still she walked onward; she soon became bewildered, and knew not where she was. Presently she met a man, and inquired of him if she was near the city gate. He pointed out the way to her. This gave her courage: she hastened onwards, and soon was beyond the walls of Granada, but she could not discover any one in waiting. She had no thought of blaming or misdoubting her lover: she hoped each moment was bringing her nearer to him; and she pursued the highway, trembling at each bush, and calling on Don Pedro at every step. But the farther she went, the farther was she from the right track. She had left the city by the gate directly opposite to the road to Portugal.

Meantime, Don Pedro could not disengage himself from Henriquez and his father. They would not quit him, and absolutely forced him to enter the house with them; and Pedro, hoping that Celestina would hear of his arrival, reluctantly complied. Alonzo went directly to his niece's room, to tell her of the danger from which her intended husband had so fortunately escaped. He called, but received no answer: he entered, and was horrified when he beheld the open window. His cries soon brought the servants, and the alarm was given all over the house. Pedro, in despair, declared he would run to seek her; and Henriquez, thanking him for his friendly sympathy, prepared to accompany him. But Pedro avoided this by proposing that they should take different roads; and not doubting that Celestina had taken the road to Portugal, he offered to seek her in that direction, and proposed that Henriquez should pursue the opposite path.

The unhappy Celestina was on the road to the Alpuzarras, when she thought she heard the sound of horses' feet. Her first thought was that Don Pedro was seeking her, but her second was the fear of travellers or brigands; and, trembling with terror, she crept behind a bush by the road-side, from whence she beheld Henriquez and several attendants pass by. Dreading to fall once more into the power of Alonzo, she turned from the high road, and plunged into the surrounding wood. The Alpuzarras are a chain of mountains extending from Granada to the sea; they are inhabited only by shepherds and labourers. An arid and stony soil, a few chestnut-trees scattered here and there, torrents, and roaring waterfalls, and a few goats wandering among the summits of the mountains, were the objects beheld by Celestina in the first light of the morning. Worn out with grief and fatigue, and her feet wounded by the rough stones, she seated herself on a rock, beside which trickled a little rill. The silence of the place,—the wild country around her,—the sound of many waterfalls subdued by distance, and the murmur of the rill falling into the basin it had worn, all united to remind poor Celestina of her unhappy fate—abandoned in a desert by all the world. Her tears fell fast as she reflected on her situation, but she thought more of Don Pedro. "It was not to him," thought she, "that I gave the diamonds. How was it that I could mistake him? Ah! why did not my heart warn me that I was wrong? I know he is seeking me; he weeps far away from me, and I shall die far from him!"

Her mournful thoughts were suddenly interrupted by the sound of a flute, and presently she heard a sweet but uncultivated voice singing a rustic air, in which the fleeting pleasures of love are deplored, and the inconstancy of a lover was complained of. Celestina rose to discover the musician, and at no great distance she discovered a young goatherd, sitting beneath a willow, watching with tearful eyes the water that flowed at his feet: he held a flute in his hand, and by his side lay a stick and a small bundle wrapped up in a goat-skin.

"You seem to be abandoned and cast off," said Celestina to the stranger: "take pity on one who, like yourself, is so also. Direct me, I beg of you, to some house or village among these mountains, where I may find, not repose,—that, alas! is impossible,—but food."

"Alas, madam!" replied the goatherd, "I would with pleasure conduct you myself to Gadara, which lies between these rocks; but you would not desire me to return, if you knew that my mistress is to be married this day to my rival. I am about to leave these mountains, never more to return; and I carry nothing with me but my flute, a suit of clothes in this bundle, and the remembrance of my lost happiness."

These words inspired Celestina with a new design. "My

friend," said she, "you have no money, and you will need it. I have a few pieces of gold, which I will divide with you, if you will give me the dress in your bundle." The goatherd accepted her offer. Celestina gave him twelve ducats, and, after receiving directions as to the road to Gadara, took leave of the goatherd, and, retiring among the rocks, put on the dress she had purchased.

Thus equipped, she took the road to the village, and, entering the market-place, inquired of the peasants she found assembled there, if none of them wanted a farm-servant. They gathered round her, and looked at her with surprise: the young girls especially admired her beautiful fair hair, which flowed over her shoulders; her mild, sparkling eyes, modestly cast down; and her light, slender figure. Nobody could imagine where this beautiful young man could have come from. One supposed it was a great lord in disguise; another, that it was a prince who had fallen in love with a shepherdess; and the magistrate assured them that it was Apollo, who had returned a second time to take care of their sheep.

Celestina, who had taken the name of Marcelio, was not long in finding a master; no other than the old alcalde of the village, who was regarded as the most worthy man in all the country. This good farmer (for the alcaldes of the villages are not of higher rank) soon conceived a great friendship for Marcelio. Before a month had elapsed, he took him from the care of his flock, and put all his household under his charge; and Marcelio acquitted himself with such mildness and fidelity as to be beloved by both master and servants. At the end of six months, the alcalde, who was more than eighty years old, left the whole care of his property to Marcelio; he even consulted him on the causes which came before him for his decision, and he had never made such just decrees as since he had been directed by Marcelio. Marcelio was the pattern and the delight of the village; his mildness, his grace, his wisdom, gained all hearts. "Behold," said the mothers to their sons,—"behold this handsome Marcelio: he is always with his master; he is unceasingly occupied in making his old age happy, and does not, like you, leave his work to run after the village girls."

Thus two years passed away. Celestina, whose thoughts were always occupied with Don Pedro, had secretly sent a shepherd, on whom she could rely, to make inquiries at Granada concerning her lover, Alonzo, and Henriquez. The shepherd reported that Alonzo was dead, that Henriquez was married, and that nothing had been heard of Don Pedro for two years. Celestina now lost all hope of ever seeing him again, and endeavoured to accustom herself to her lot, and to find happiness in the peace and friendship she enjoyed in the village. The old alcalde at length fell dangerously ill. Marcelio paid him all the attentions of the most affectionate son, and the good old man behaved like a grateful father, and at his death left all his property to his faithful Marcelio.

All the villagers mourned their alcalde, and, after rendering him the funeral honours with more tears than pomp, they assembled to elect his successor. In Spain, certain villages possess the privilege of electing their alcaldes,—that is to say, the magistrate who judges all suits, takes cognizance of all crimes, causes the guilty to be taken into custody, examines them, and delivers them over to the superior jurisdiction, which generally confirms the sentence passed by the alcalde.

The assembled villagers unanimously elected him whom the old alcalde had designed for his successor. The old men, followed by all the youngsters of the village, went in formal procession to carry the ensign of his dignity, a white wand, to Marcelio. Celestina accepted it; and, affected even to tears with this testimony of the affection of these honest people, she resolved to consecrate her life, formerly destined for love, to their happiness.

Leaving the new alcalde busy with the cares of office, let us return to the unfortunate Pedro, whom we left galloping on the road to Portugal, and at each step increasing the distance from his beloved.

He reached Lisbon without obtaining any intelligence of Celestina. He retraced his steps, and made every possible research, and returned again to Lisbon with no better fortune. After six months of fruitless inquiry, he felt satisfied that Celestina had not returned to Granada, and he resolved to go to Seville, where he knew she had relations. He found, on his arrival, that they had just sailed in the Mexican fleet; and, doubting not that there he should recover his long-lost mistress in Mexico, he hastened on board the last vessel in the fleet, which was on the point of sailing. He arrived safely, discovered the relations of Celestina, but they knew nothing concerning her. He



returned to Spain: the vessel encountered a storm, and was wrecked on the coast of Granada. Don Pedro and some others of the passengers escaped, and, proceeding into the mountains in search of shelter, were led by chance or Cupid to Gadara.

Don Pedro and his companions went into the first inn they came to; and they were congratulating each other on their escape, when a dispute arose between one of the passengers and a soldier, concerning a casket which the soldier had saved and the passenger claimed as his property. Don Pedro, who endeavoured to settle the quarrel, proposed that the passenger, in order to prove his claim, should state what the box contained; which was done, and the box opened to ascertain if what was said were true: but what was the surprise of Don Pedro when he recognized Celestina's jewels, and among them the emerald he had given her!

"How did you come by these jewels?" he demanded of the passenger, in a voice of fury.

"What is that to you?" replied the pretended owner, "it is enough that they belong to me;"—and so saying, he attempted to snatch them from Don Pedro, who repulsed him, and both drawing their swords, they fought, and after a few passes the passenger fell wounded. Don Pedro was seized and hurried to prison, and the master of the inn sent his wife to fetch the curé to attend the dying man, whilst he himself ran with the casket to the alcalde, and informed him of what had happened.

What was the surprise, the joy, the terror of Celestina, on recognizing her diamonds, and hearing that they had been challenged by the gentleman who was in custody! She went at once to the inn, where the curé had already arrived; and the wounded man, who believed himself dying, affected by his exhortations, acknowledged to the alcalde that, two years before, as he was passing at night through a street in Granada, a woman at a window gave him the casket, telling him to hold it while she came down; that he ran away with the jewels, and he begged pardon of God for the robbery. Celestina hastened to the prison: how her heart beat as she went! She quickened her steps: everything proved that it was Don Pedro whom she was about to behold, but she feared being recognised by him. She pulled her hat down over her eyes, muffled herself in her cloak, and, preceded by a turnkey who carried a light, she entered the dungeon.

She was scarcely at the foot of the stairs when she recognised Don Pedro. Joy almost took away her senses. She leaned against the wall; her head declined on her shoulder, and the tears flowed down her cheeks. By a great effort she repressed her emotion, and forcing herself to speak boldly, she approached the prisoner. "Stranger," said she, in a feigned voice, and often pausing to take breath, "you have wounded your companion, it is feared to death. What have you to say to excuse such an action?" After speaking these words she could no longer support herself, but, sitting down on a stone, covered her face with her hands.

"Alcalde," replied Don Pedro, "I have committed no crime; it was but an act of justice; but I desire death, for death alone can end the misfortunes of which that wretch was the first cause." He said no more, but the name of Celestina was heard upon his lips.

Celestina trembled when she heard him pronounce her name: she was no longer mistress of her transport; she rose, and was on the point of throwing herself into the arms of her lover, when the presence of the gaoler restrained her. She turned away her eyes, and, stifling her sobs, desired to be left alone with the prisoner. She was obeyed. Suffering her tears of joy to flow more freely, she now approached Don Pedro, and taking him by the hand, she said, in a voice interrupted by her sobs, "You still love her, who lives but for you?"

At that voice, at those words, Pedro raised his head, and scarcely dared to believe his eyes: "Oh, heaven, is it you? is it my Celestina, or an angel who takes her figure? Ah, it is thee!" cried he, pressing her in his arms, and bathing her with his tears: "it is my wife, my friend—all my misfortunes are ended."

And it was so. As the wounded man proved likely to recover, Celestina had power to restore Don Pedro to liberty, and, assembling all the villagers, she publicly declared her sex and her adventures, and resigned her office; and presenting Don Pedro to them as her intended husband, requested the curé to complete her happiness by uniting them. But now one of the old villagers stepped forth. "Oh, stranger," said he, "why will you take from us our alcalde? his loss we cannot repair. Condescend to remain with us; be yourself our alcalde, our master, our friend. In a great city, the cowardly and the wicked, who have the same rank,

will think themselves your equals;—here, each virtuous inhabitant will look upon you as a father."

Pedro, whose wanderings had made him well inclined to rest, and who loved the people by whom his Celestina was so honoured, consented. Two days after, the lovers were married, and never was a bridal feast celebrated more blithely. Pedro paid one more visit to cities, and then bade adieu to them for ever. He visited Granada, and, after a tedious process, succeeded in recovering his wife's fortune from Henriquez: he then retired to Gadara, where he and Celestina lived long, well, and happily. They were mourned for by those who looked upon them with love and veneration, and their memory is revered to this day.

#### HISTORICAL EPISODES.

##### CLANDESTINE MARRIAGE OF THE EARL OF HERTFORD AND LADY CATHERINE GREY.

HENRY THE SEVENTH—he who won the fight of Bosworth, and twined the roses of York and Lancaster—had a daughter (sister, of course, of Henry VIII.) who, after being married for three months to Louis XII. of France, married the Duke of Suffolk. From this marriage sprang a daughter, who married Henry Grey, Marquis of Dorset, afterwards created Duke of Suffolk; and these were the parents of a family of daughters, the eldest of whom—the accomplished, amiable, and unfortunate Lady Jane Grey,—is well known to all readers of English history.

It was the ambition of her parents that caused the ruin of Lady Jane Grey. The hereditary right to the throne, though very well understood, and even acted on, was still not so distinctly defined as to prevent attempts to secure that glittering temptation, the crown. The wars between the houses of York and Lancaster were waged on mingled notions of hereditary right and the right of power or possession; and, though Henry VII. may be said to have settled the succession, and to have left a secured crown to his son, Henry VIII., the latter, by his repeated marriages, divorces, and the passing of acts of illegitimacy against his own children, did much to disturb opinion about the right of succession. Moreover, when Edward VI. was dying, he was prevailed upon by the Duke of Northumberland to make a will, excluding his sisters, Mary and Elizabeth, from the throne, and settling the crown on Lady Jane Grey, the eldest daughter of the Suffolk family, who was married to a son of Northumberland's. Lady Jane Grey's mother, who was a niece of Henry VIII., gave up her right in favour of her daughter; but Lady Jane herself gave a very reluctant assent to the ambitious scheme of her father and father-in-law. Mary became queen, almost without a struggle; and Lady Jane Grey, along with her young husband, was involved in the ruin of a project to which she could hardly be said to have been a party.

Some years afterwards, we find Lady Catherine Grey, a sister of Lady Jane's, at Elizabeth's court, in the capacity (seemingly) of a maid of honour. She had been married to Lord Herbert, a son of the Earl of Pembroke; but the earl, fearful of all connexion with royal blood, especially under such a jealous reign, procured an immediate divorce. But Lady Catherine herself, doubtless, saw no reason why the "blood royal" that ran in her veins should be a cause of exclusion from a participation in the enjoyments of social and domestic life; so she entered into a secret contract with the Earl of Hertford, whose sister, Lady Jane Seymour, was a companion of Lady Catherine's at court. "The queen went one morning to Eltham to hunt, when Lady Jane and Lady Catherine, according to previous concert, leaving the palace at Westminster by the stairs at the orchard, went along by the sands [it would be hard to go along the river-side by the sands now-a-days.] to the earl's house in Canon-row. Lady Jane then went for a priest, and the parties were married. The earl accompanied them back to the water-stairs of his house, put them into a boat, and they returned to the court time enough for dinner in Master Comptroller's chamber. Having consummated his marriage, Lord Hertford travelled into France."

But whisperings began to run through the court; and Lady Catherine, aware that the matter could not be kept from the sharp ears of the queen, "first confessed it privately to Mrs. Sentlowe, and afterwards sought Lord Robert Dudley's chamber, to break out to him that she was married, in the hope of softening the anger

\* Ellis's Original Letters, Second Series, vol. ii.

of the queen; but Elizabeth committed her to the Tower, where she was afterwards delivered of a son. Lord Hertford was summoned home, to answer for his misdemeanour; when, confessing the marriage, he also was committed to the Tower."

Now, the pleasant comedy was turned into a tragedy: a formal commission of inquiry was issued, at the head of which was Archbishop Parker, Bishop Grindal, and Sir William Petre; "when the parties being unable, within a time prescribed, to produce witnesses of the marriage, a definitive sentence was pronounced against them; and their imprisonment ordered to be continued during the queen's pleasure." So, because the priest who married them probably thought it prudent to keep out of the way, the young couple, who mutually acknowledged their marriage, and were willing to live together as loving man and wife, were committed to the Tower, at the pleasure of an arbitrary shrew!

The families of the parties stirred themselves in behalf of the young couple. Lady Catherine's uncle, Lord John Grey, of Pyrgo, in Essex, wrote to Sir William Cecil (Lord Burleigh) in behalf of his niece. "In faith," says he, "I would I were the queen's confessor this Lent, that I might join her in penance to forgive and forget; or otherwise able to step into the pulpit, to tell her highness that God will not forgive her, unless she freely forgive all the world." But Elizabeth was not a woman to be either intimidated or cajoled; and therefore, when we find Lady Catherine removed from the Tower to the custody of her uncle in Essex, we are not to infer that the independent language of the uncle was the sole cause of the change. "The ravages of the plague," says Sir Henry Ellis, "in London, in 1563, induced Queen Elizabeth to relax somewhat of her severity toward Lord Hertford and Lady Catherine. Secretary Cecil, writing to Sir Thomas Smith in France, in the month of August of that year, says, 'My Lord of Hertford and my Lady Catherine, by cause of the plague, are thus delivered: he with his mother, as a prisoner; she with her uncle, my Lord John Grey.' He adds—'They die in London above a thousand in a week.'"

While Lady Catherine was with her uncle at Pyrgo, several letters were sent from them both to Cecil, entreating the queen's forgiveness. With one of Lord Grey's letters was sent a petition from Lady Catherine to the queen, the style of which, if judged by our modern ideas, is quite offensive. Only think of one woman asking another woman forgiveness for a venial offence in the following language—language, we might almost think, borrowed from the Liturgy:—

"I dare not presume, most gracious sovereign, to crave pardon for my disobedient and rash matching of myself, without your highness's consent,—I only most humbly sue unto your highness to continue your merciful nature toward me. I *knowledge* myself a most unworthy creature to fail so much of your gracious favour as I have done. My just felt misery and continual grief doth teach me daily, more and more, the greatness of my fault, and your princely pity increaseth my sorrow, that have so forgotten my duty towards your majesty. This is my great torment of mind. May it therefore please your most excellent majesty to license me to be a most lowly suitor unto your highness, to extend toward my miserable state your majesty's favour and accustomed mercy, which, upon my knees, in all humble wise I crave, with my daily prayers to God, long to continue and preserve your majesty's reign over us.—From Pyrgo, the 7th of November, 1563."

Perhaps Elizabeth might have relaxed in her despotic and harsh treatment of Lord and Lady Hertford, if a Marplot had not come in the way. One John Hales, who had been clerk of the hanaper in the reign of Henry the Eighth, wrote a book on the ticklish subject of the succession to the crown, and introduced the claims of the Grey family, as well as the debateable point of the marriage. "Here," says Secretary Cecil, "is fallen out a troublesome fond matter. John Hales had secretly made a book in the time of the last parliament, wherein he had taken upon him to discuss *no small matter*,—viz. the title to the crown after the queen's majesty. Having confuted and rejected the line of the Scottish queen, and made the line of the Lady Frances, mother to the Lady Catherine, only next and lawful. He is committed to the Fleet for this boldness, specially because he hath communicated it to sundry persons. My Lord John Grey is in trouble also for it. Beside this, John Hales hath procured sentences and counsels of lawyers from beyond seas to be written in maintenance of the Earl of Hertford's marriage. This dealing of his offendeth the queen's majesty very much."

No doubt it did; the royal shrew was not to be trifled with, and so poor Lord Hertford and his wife were sent back to the Tower again. Anne, Duchess of Somerset, mother of Lord Hertford,

wrote to Cecil, setting forth—"how unmeet it is this young couple should wax old in prison," but all to no purpose. Meantime, Lord Hertford, by bribing his keepers, was permitted to pass from his own apartments to those of his wife, in the Tower. Another child was born, and this roused all the wrath of the "virgin queen." Lord Hertford was fined in the monstrous sum of fifteen thousand pounds,—a large sum of money in those days. This fine was divided into three parts, and was alleged to be inflicted for a *triple crime*: five thousand for the original offence, five thousand for *breaking his prison*, and five thousand for repeating his vicious act.

But death came to release Lady Catherine from her arbitrary and cruel imprisonment. A copy of a manuscript, entitled "the Manner of her Departing," is given by Sir Henry Ellis; and he adds, very justly, "the reader will peruse it with a feeling of pity." After describing the prayers and pious ejaculations which she uttered, the narrative mentions that Lady Hopton said to her, "Madam, be of good comfort, for with God his favour you shall live and escape this; for Mrs. Cousen saith you have escaped many dangers, when you were as like to die as you be now." "No, no, my lady, my time is come, and it is not God's will that I should live any longer; and his will be done, and not mine." Then, looking upon those that were about her—"As I am, so shall you be; behold the picture of yourselves!" After conversation on one or two matters, "calling unto her woman, she said, 'Give me the box wherein my wedding ring is;' and when she had it, she opened it, and took out a ring with a pointed diamond, and said, 'Here, Sir Owen, deliver this unto my lord; this is the ring that I received of him when I gave myself to him, and gave him my faith.' 'What say you, madam,' said Sir Owen, 'was this your wedding ring?' 'No, Sir Owen,' she said, 'this was the ring of my assurance unto my lord; and there is my wedding ring,' taking another ring, all of gold, out of the box, saying, 'Deliver this also my lord, and pray him, even as I have been to him, (as I take God to witness I have been,) a true and a faithful wife, that he would be a loving and a natural father unto my children, unto whom I give the same blessing that God gave to Abraham, Isaac, and Jacob.' And then took she out another ring with a death's head, and said, 'This shall be the last token unto my lord that ever I shall send him: it is the picture of myself.' The words about the death's head were these—'While I live, yours!' and so, looking down upon her hands, and perceiving the nails to look purple, said, 'Lo, here he is come!' and then, as it were with a joyful countenance, she said, 'Welcome, Death!' and embracing herself with her arms, and lifting up her eyes and hands unto heaven, knocking her hands upon her breast, she brake forth, and said, 'O Lord, for thy manifold mercies, blot out of the book all mine offences!' Whereby Sir Owen, perceiving her to draw towards her end, said to Mr. Bockham, 'Were it not best to send to the church, that the bell\* may be rung?' and she herself hearing him, said, 'Good Sir Owen, let it be so.' Then, immediately perceiving her end to be near, she entered into prayer, and said, 'O Lord, unto thy hands I commend my soul! Lord Jesus, receive my spirit!' and so, putting down her eyes with her own hands, she yielded unto God her meek spirit, at nine of the clock in the morning, the 27th of January, 1567."

"The marriage," says Sir Henry Ellis, "between Lady Catherine Grey and the Earl of Hertford was not established till 1606; when the priest who had joined them being produced, and other circumstances agreeing, a jury at common law found it a good marriage." Lord Hertford was *nine years* in prison.

We may conclude this touching and even tragic story with something approaching to farce. Lady Mary Grey, a sister of Lady Catherine, who is described as having been the most diminutive lady about the court of Elizabeth, imitated her sister in the matter of secrecy in her marriage. She was married privately to Henry Keys, the queen's gentleman porter. The marriage does not seem to have been a very romantic one, nor, on the lady's part, a very dignified one; but the insignificance of it might have sheltered the couple from the royal virgin's vengeance. That "omnibus" secretary, Cecil, writing all the way to France, says to Sir Thomas Smith—"Here is an unhappy chance, and monstrous. The serjeant porter, being the biggest gentleman in this court, hath married secretly the Lady Mary Grey, the least of all the court. They are committed to several prisons. *The offence is very great.*" Sir Henry Ellis gives copies of two letters from Lady Mary Grey to Cecil, begging for pardon.

\* The "passing bell." It was rung at the passing from life to death, with the intention that those who heard it should pray for the person dying.



## THE CENTRAL CRIMINAL COURT.

The visitor of London who walks along the narrow street called the Old Bailey, leading from Ludgate Hill, and crossing Newgate-street, would find it hard to fancy that a portion of the wall of the city once ran along it. Yet, so it was; and the prison of Newgate preserves in its name the memorial of a new gate having been struck through the wall, Lud-gate not being a sufficient thoroughfare. Prisoners were, in ancient times, confined in apartments adjoining or over the gate of the city or castle, if they were not removed to a place of greater security. Hence, when the prison was built in the room of the prison of the gate, it retained the name of Newgate.

The origin of the term "Bailey," the reader, if he is curious in etymology, may trace from one of two words, or from a combination of them both. It may come from "*ballium*," an outer bulwark; a portion of the ditch outside the city wall lay along the site of the street called the Old Bailey, and the term "*ballium*" was applied to a ditch as well as to outworks. "The Old Bailey," say the antiquarians, "near Lud Gate in London, received its name from its relative position in regard of the antient wall of the city." But perhaps the name was perpetuated by its association with the French "*Baillé*," signifying to be delivered to the care of one's keeper or bail. For, as a man accused of crime is held, by our old common law, to be innocent until proved to be guilty, so, strictly speaking, no man should be imprisoned, or suffer bodily restraint or coercion of any kind, until sentence is pronounced against him. To prevent, however, the escape of the guilty, accused persons were required to be *baillé*, or bailed—to find sureties who would be answerable for their appearance when called upon to take their trial; and those who could not find friends or neighbours willing to undergo this responsibility, were, of course, committed to prison for security.

The Old Bailey, with the adjoining prison of Newgate, have been as famous in the annals of crime, as London is in the history of Britain. The prison, until just the other day almost, was pre-eminent as a school of iniquity; other prisons might have been bad, but considering that Newgate was the criminal receptacle of such a city as London, it was abominable. Every body has heard of the labours of Mrs. Fry; and this consideration should cheer all philanthropic labourers, that even if their aims are only individual, yet those very individual aims may powerfully help forward great general good. The main object of Mrs. Fry and her fellow-workers was doubtless the immediate personal reformation of the unhappy victims of iniquity confined in prisons; but in doing so, they powerfully aided the progress of the great question of prison reform.

We have already given in the LONDON SATURDAY JOURNAL (No. IV., pp. 60–62), some details respecting the gradual amelioration of the Criminal Law, and the numbers who were executed annually till within a very recent period, as contrasted with the milder administration of the law in the present day. As a sort of finish to those statements, we here present the reader with a picture of "The Condemned Sermon," as it used to be performed eight times a year within the prison of Newgate, over criminals condemned to die at the Old Bailey. The writer of this sketch is Mr. E. G. Wakefield, the well-known political economist, and author of "England and America." He was himself confined in Newgate, and had ample opportunity for studying the details, of which he has composed his picture. Some of our readers may be familiar with it, as it has repeatedly appeared in print; and others may think that there is exaggeration in the statements. But we have his own authority that not a circumstance is stated which he did not witness: it was written so recently as 1830, and may be taken as a powerful dramatic sketch of scenes, the memory of which is already fading away, but which, only a very few years ago, were performed, at intervals of six weeks or two months each, within the heart of the City of London.

"The condemned service is conducted with peculiar solemnity, being attended by the sheriffs in their great gold chains, and is in other ways calculated to make a strong impression on the minds of the congregation, who may be considered as representing the criminals of the metropolis. Whether the impression be a good or a bad one, I leave the reader to decide; but in order that he may have the necessary materials for deciding justly, I lay before him the following description of a condemned service, premising only this—that not a circumstance is stated which I have not witnessed.

"The sheriffs are already seated in their own pew, accompanied by their under-sheriffs, and two friends drawn thither by curiosity. Not far from them appear two tall footmen, swelling with pride at their state liveries. The ordinary is in his desk: his surplice is evidently fresh from the mangle: and those who see him every day observe an air of peculiar solemnity, and perhaps of importance, in his face and manner. The clerk is busied, searching out the psalms proper for the occasion.

"The tragedy begins. Enter first the school-master and his pupils; then the prisoners for trial; next the transports, amongst whom are the late companions of the condemned men; and then the women. Lastly come the condemned. They are four in number. The first is a youth, about eighteen apparently. He is to die for stealing in a dwelling-house goods valued at more than 5*l*. His features have no felonious cast: on the contrary, they are handsome, intelligent, and even pleasing. Craft, and fear, and debauchery, have not yet had time to put decided marks on him. He steps boldly, with his head upright, looks to the women's gallery, and smiles. His intention is to pass for a brave fellow with those who have brought him to this untimely end; but the attempt fails; fear is stronger in him than vanity. Suddenly his head droops; and, as he sits down, his bent knees tremble and knock together. The second is an older criminal, on whose countenance villain is distinctly written. He has been sentenced to death before, but reprieved, and transported for life. Having incurred the penalty of death by the act, in itself innocent, of returning to England, he is now about to die for a burglary committed since his return. His glance at the sheriffs and the ordinary tells of scorn and defiance. But even this hardened ruffian will wince at the most trying moment, as we shall see presently. The third is a sheep-stealer, a poor ignorant creature, in whose case there are mitigating points, but who is to be hanged in consequence of some report having reached the ear of the Secretary of State, that this is not his first offence; and, secondly, because of late a good many sheep have been stolen by other people. He is quite content to die: indeed, the exertions of the chaplain and others have brought him firmly to believe, that his situation is enviable, and that the gates of Heaven are open to receive him. Now observe the fourth—that miserable old man in a tattered suit of black. He is already half dead. He is said to be a clergyman of the Church of England, and has been convicted of forgery. The great efforts made to save his life, not only by his friends but by many utter strangers, fed him with hope until his doom was sealed. He is now under the influence of despair. He staggers towards the pew, reels into it, stumbles forward, flings himself on to the ground, and, by a curious twist of the spine, buries his head under his body. The sheriffs shudder, their inquisitive friends crane forward; the keeper frowns on the excited congregation; the lately smirking footmen close their eyes and forget their liveries; the ordinary clasps his hands; the turnkeys cry 'hush!' and the old clerk lifts up his cracked voice, saying, 'Let us sing to the praise and glory of God.'

"People of London! is there any scene in any play so striking as this tragedy in real life, which is acted eight times a year in the midst of your serene homes?

"They sing the Morning Hymn, which of course reminds the condemned of their prospect for to-morrow morning. Eight o'clock to-morrow morning is to be their last moment. They come to the burial service. The youth, who alone, of those for whom it is intended, is both able and willing to read, is, from want of practice, at a loss to find the place in his prayer-book. The ordinary observes him, looks to the sheriffs, and says aloud the 'Service for the Dead!' The youth's hands tremble as they hold the book upside-down. The burglar is heard to mutter an angry oath. The sheep-stealer smiles, and, extending his arms upwards, looks with a glad expression to the roof of the chapel. The forger has never moved.

"Let us pass on. All have sung the 'Lamentation of a Sinner,' and have seemed to pray, 'especially for those now awaiting the awful execution of the law.' We come to the sermon.

"The ordinary of Newgate is an orthodox, unaffected Church of England divine, who preaches plain homely discourses, as fit as any religious discourse can be fit for the irritated audience. The sermon of this day, whether eloquent or plain, useful or useless, must produce a striking effect at the moment of its delivery. The text, without another word, is enough to raise the wildest passions of the audience, already fretted by an exhibition of gross injustice, and by the contradiction involved in the conjunction of religion with the taking away of lives. 'The sacrifices of God are a broken

heart: a broken and contrite heart, O God! thou wilt not despise.' For a while the preacher addresses himself to the congregation at large, who listen attentively—excepting the clergyman and the burglar, of whom the former is still rolled up at the bottom of the condemned pew, whilst the eyes of the latter are wandering round the chapel, and one of them is occasionally winked, impudently, at some acquaintance amongst the prisoners for trial. At length the ordinary pauses: and then, in a deep tone, which, though hardly above a whisper, is audible to all, says—'Now to you, my poor fellow-mortals, who are about to suffer the last penalty of the law.' But why should I repeat the whole! It is enough to say, that in the same solemn tone he talks for about ten minutes of crimes, punishments, bonds, shame, ignominy, sorrow, sufferings, wretchedness, pangs, childless parents, widows, and helpless orphans, broken and contrite hearts, and death to-morrow morning for the benefit of society. What happens! The dying men are dreadfully agitated. The young stealer in a dwelling-house no longer has the least pretence to bravery. He grasps the back of the pew; his legs give way; he utters a faint groan, and sinks on the floor. Why does no one stir to help him? Where would be the use? The hardened burglar moves not, nor does he speak; but his face is of an ashy paleness; and, if you look carefully, you may see blood trickling from his lip, which he has bitten unconsciously, or from rage, or to rouse his fainting courage. The poor sheep-stealer is in a frenzy. He throws his hands far from him and shouts aloud, 'Mercy, good Lord! mercy is all I ask. The Lord in his mercy come! There! there! I see the Lamb of God! Oh! how happy! Oh! this is happy!' Meanwhile, the clergyman, still bent into the form of a sleeping dog, struggles violently,—his feet, legs, hands, and arms, even the muscles of his back, move with a quick jerking motion, not naturally, but, as it were, like the affected parts of a galvanized corpse. Suddenly he utters a short sharp scream, and all is still.

"The silence is short. As the ordinary proceeds 'to conclude' the women set up a yell, which is mixed with a rustling noise, occasioned by the removal of those whose hysterics have ended in fainting. The sheriffs cover their faces; and one of their inquisitive friends blows his nose with his glove. The keeper tries to appear unmoved; but his eye wanders anxiously over the combustible assembly. The children round the communion-table stare and gape with childish wonder. The two masses of prisoners for trial undulate and slightly murmur; while the capital convicts, who were lately in that black pew, appear faint with emotion.

"This exhibition lasts for some minutes, and then the congregation disperses; the condemned returning to the cells; the forger carried by turnkeys; the youth sobbing convulsively, as a passionate child; the burglar muttering curses and savage expressions of defiance; whilst the poor sheep-stealer shakes hands with the turnkeys, and points upward with madness in his look."

Such scenes are now of rare occurrence: the year 1838 (as was remarked in the article in this Journal already alluded to) passed without a "condemned sermon" having been preached in Newgate, and without an execution in the metropolis.

The Old Bailey was the great criminal court of the metropolis, and derived its importance from that circumstance. The chief part of London lies in Middlesex, and the large population of the metropolis afforded ample employment to the court. But its jurisdiction did not extend beyond the county; and, therefore, as London began to spread on the other side of the Thames, great anomalies presented themselves. A prisoner who committed an offence on the Middlesex side of the Thames, would be committed to Newgate, and tried, probably, in a few weeks, for the sessions at the Old Bailey were held eight times a year; while, if he crossed the river, and committed an offence in Lambeth, or at Greenwich, he would be transferred to the Surrey or Kent assizes, and might be in prison four or five months before trial. To remedy this and other inconveniences, an act of parliament was passed in 1834, creating a CENTRAL CRIMINAL COURT, to be held at the Old Bailey, which has jurisdiction over offences committed in all places within ten miles of St. Paul's,—an extent which includes portions of Surrey, Kent, and Essex, as well as Middlesex. Offences committed on the high seas, within the jurisdiction of the Admiralty of England, can also be tried in this court; so that the reader may observe occasionally in the newspapers, notices of sailors and others apprehended at such distant ports as Bristol or Liverpool, and brought up to be tried at the Central Criminal Court. Its sittings are held twelve times a year, or once a month; and, as each session generally occupies a fortnight, and sometimes nearly three weeks, the space between them is exceedingly brief.

We may easily learn the fact of the Court being in session by the scene presented in Old Bailey street. Straw is laid down in the narrow street, to deaden the noise of passing carriages; while groups of idling or curious individuals, policemen and witnesses in attendance, may be seen swarming about the entrances of the Court, or crossing over to the public-houses. In the earlier part of the session, the Grand Jury are busy in their own room, examining the bills of indictment; in the "OLD COURT," two of the Judges may be presiding; and, in the "NEW COURT," the Recorder or Common-Serjeant: so that, in fact, during each session of the Central Criminal Court, there may be said to be three tribunals sitting, investigating and trying offences.

The "Old Court" is the chief or main court at the Old Bailey; here the judges, from choice or predilection, generally choose to sit, the "New Court" never being honoured with the presence of a judge, unless there is a pressure of business. In the "Old Court," therefore, the more serious crimes are tried, and to it the public attention is more generally directed. The Recorder and Common Serjeant of the Corporation of the City of London preside in the "New Court," and also in the absence of the judges, in the "Old Court;" sometimes in the mornings before the judges arrive, and in the evenings, if they go away early.

Formerly, the Recorder used personally to report to the King in Council the cases of all those tried at the Old Bailey, against whom sentence of death was recorded. The sentences of the various prisoners were also pronounced by him after the trials were over. The accession of her present Majesty rendered necessary a change in the practice of reporting in Council the cases of those against whom sentence of death was recorded; there being, of course, many cases the details of which could not be, with propriety, gone into in presence of the Queen. An act was therefore passed, soon after her accession, assimilating the practice of the Central Criminal Court to those of other criminal courts, which has somewhat diminished the personal importance of the Recorder.

The "Old Court" is an oblong room, along one side of which is the "Bench,"—a range of crimson-cushioned seats, the central seat having a canopy over it, on which is the royal arms. The act of Parliament creating the Central Criminal Court, makes the Lord Mayor and Aldermen judges of the court, but they take no part beyond being present. There are seldom more than two or three members of the Corporation on the bench at a time. On the right hand of the bench is the jury box; in the centre of the room is a table, round which sit the counsel; and opposite the bench is the "dock"—a square box, the front of which is technically called the "bar." Over the dock is a small gallery for visitors, who must pay for admission, from one shilling and sixpence and upwards each, according as the door-keeper estimates the importance of the trial, or the eagerness of the persons to be admitted. This is a disgraceful practice. By the common law, courts of justice ought freely to be open;—you can walk without obstruction into the space below the bar in the House of Lords, during the arguing of an appeal case; the superior courts at Westminster Hall are as freely open as a place of worship; but the doors of the Old Bailey are only unlocked by silver keys.

We have entered, we will say, during the progress of a trial.—A witness is under examination in the witness-box; one or two of the counsel are eagerly consulting together; others are carelessly reading newspapers; and perhaps the prisoner at the bar trembling for his fate. Enter the grand jury, accompanied by an officer bearing a wand: the trial is interrupted; the clerk of the court reads aloud the "true bills" returned against prisoners; and the frequent recurrence of the word "felony," as he reads, soon tells the unpractised stranger that the larger portion of the business of the Central Criminal Court arises from those mean and petty crimes which spring from the combined influence of ignorance, vice, and poverty. When the grand jury retire, the trial is resumed; and after its conclusion, a crowd of men, women, and youths may be seen pouring into the dock, ascending by a staircase, through a covered passage, from the adjoining prison of Newgate. A strange medley they seem, and a humbling spectacle they present,—some in tatters, some decently clothed, some looking round with a frown or with an air of indifference, others gazing, tittering, or wondering. These prisoners are arraigned by the "batch," to save time; their crimes being of a class. They are told that they have the privilege of challenging the jury, but possibly the greater number do not understand what that means. Then each jurymen is sworn separately by the officer of the court—"You shall well and truly try, and true deliverance make, between our sovereign lady the Queen and the prisoners at the

bar, whom you shall have in charge, and a true verdict give, according to the evidence. So help you God!" After the usual proclamation has been made, calling upon all witnesses to come forward, &c., the group in the dock are conducted back to the prison, except the one or two whose particular case is to be taken first, and then a trial begins. It is only the mass of petty thieves, and professional dealers in crime, who are thus arraigned by the "lump!" important or peculiar cases generally stand by themselves.

We were in the "Old Court" the other day, when a decent-looking man was placed at the bar, charged with a paltry felony—the stealing of a few sovereigns. In looking at him, the first feeling was that of regret, that a man apparently so respectable—an honest-looking tradesman—should have had his moral sense so blunted as to incur the chance of standing at that bar for a matter of ten or eleven pounds. Straightway the prosecutor mounted the witness-box, and all eyes were fixed upon him. You might travel over London, and, amongst all its fops, wittings, and cinnamon idiots, find it hard to match him. His shirt collar was turned down, after the fashion stupidly called Byronic; his hair, parted across his head, and pasted tight down, terminated in most elaborately-formed curls behind. Some of the male portion of the audience sneered, and some of the ladies smiled—possibly one or two might have thought him a nice-looking young man. The book was put into his hand by the officer, who began—"The evidence which you shall give"—when he was stopped by the witness informing him that he *affirmed*. What was he? a Quaker? He was a Quaker in the matter of *affirmation*. That would not do: did he now belong, or had he ever belonged, to the Quakers? No. Well, then, what was he? a Separatist, or a Moravian? No—he was a *Christian*. He must be more explicit. What *sect* did he belong to? He was an *Israelite*. "Oh, then," exclaimed the counsel for the defence, (a well-known Irish barrister, who may be said to take the lead in the Central Criminal Court,) "swear him on the *Old Testament*." Ah! but he was not a *Jew*—he was a *Christian Israelite*: the result of the trial did not prove him to be "an Israelite indeed, in whom was no guile." Search was now made in the books, to see under what act he could claim exemption from taking an oath; and, during the delay, the Israelite looked around him, now folding his arms, now leaning on the brass railing which surmounts the witness-box, and seemed to enjoy his self-importance. At last the judge informed him, that none of the acts of parliament which permitted certain classes of dissenters to give evidence on affirmation could be interpreted as reaching him, and that therefore his evidence must be given on oath, or not at all. "Well, then," exclaimed the magnanimous Israelite, "rather than *justice* should be defeated, *I will take the oath!*" A new difficulty arose, started by the ingenious counsel for the defence. How had he given his evidence before the grand jury? On affirmation. Then, it was contended, the indictment was a nullity—as worthless as a piece of waste paper. The grand jury had no right to take his evidence on affirmation, seeing he was not legally entitled to the privilege; therefore, their "true bill" was no bill at all. This was a poser; it gave rise to a tedious search in the books for precedents and cases in point, nearly all the law library of the Court having been brought down, to be thumbed and turned over. During the delay, the Israelite tried to shed light on the darkness; he more than once began a speech with—"My lord, and gentlemen of the jury," but was promptly silenced; the judge, on one occasion, saying—"Hold your tongue, sir! don't *you* interfere." At last the objection was *reserved*, for the purpose of allowing the trial to go on; the Israelite was sworn, and gave his evidence. He deposed to having left a carpet-bag in a lodging which he had quitted; and on returning, found it had been rifled, and eleven sovereigns taken from a purse. The money, he affirmed, was found on the prisoner, when his person was searched by officers whom he had introduced, in order to apprehend him. The result of the trial may be told in a few words. The prosecutor, who turned out to be a *hawker*, (a title, however, he would not acknowledge,) lodged in a house, sharing half a bed, at the rate of *one shilling and sixpence a week!*—(his appearance presenting a most remarkable and ludicrous contrast to this statement)—and had concocted his villanous charge for the purpose of gratifying some malignant revenge. The money was clearly proved to be the property of the prisoner, while the prosecutor was not worth a sixpence. The jury stopped the case, and the judge told the intended victim that he left the bar without an imputation on his character: and yet, perhaps, but for the exertions of counsel, this oily-looking, affected, and sanctimonious pretending rascal, who swallowed his scruples, and

took an oath, that *justice* should not be impeded, would have transported an honest man, if he could! To such uses may our courts of justice be occasionally perverted!

The number of persons tried at the Central Criminal Court is between three and four thousand annually. The number of criminal offenders within the range of the jurisdiction of the Court may be taken at upwards of four thousand, or about one offender in every five hundred of the population.

## BIOGRAPHICAL SKETCHES.

### JOHN LEDYARD.

#### CONCLUSION.

WHEN the anchor was raised, and the sails were spread to a fair wind, Ledyard believed that at last the wish of his heart would be fulfilled; but he seemed born for disappointment. The vessel was not out of sight of land, when it was brought back for some breach of the revenue laws, and ultimately condemned. This was a severe blow to poor Ledyard: he rallied manfully against it, and renewing his project of a journey through Siberia, and thence to America, a subscription was raised for the purpose of enabling him to carry his design into execution. Sir Joseph Banks, Dr. Hunter, Sir James Hall, and Colonel Smith were his chief patrons. The amount raised could not have been very large, since we find that, on his arrival at Hamburg, he had but ten guineas left. Here he found that Major Langbain, a very eccentric American traveller, had recently been at the hotel where Ledyard lodged, and that he had gone off to Copenhagen without his baggage, taking with him only one spare shirt, and very few other articles of clothing. His trunks were to be sent after him, but, being accidentally delayed, he had written for them in terms which induced Ledyard to believe he was in want of money. Ledyard hastened to relieve the imagined distress of his countryman, and, although it was far out of his way, he went straight to Copenhagen, where he found Langbain in a very awkward situation, without money or friends, and shut up in his room for want of decent apparel to appear abroad in. Ledyard's ten guineas soon vanished. He spent two weeks with Langbain, but could not persuade him to join him in his expedition even as far as Petersburg; Langbain refused, saying—"No! I esteem you; but I can travel in the way I do with no man on earth." Ledyard consequently prepared to set out for Petersburg by himself; but how was he to do this without a farthing? He drew a small bill on Colonel Smith, and he had the good fortune to meet with a merchant who consented to cash it for him. A sum had been left in the colonel's hands to answer such an exigence, but not to the full amount of the bill; which was, however, duly honoured when it came to hand. Thus furnished, he set out, and arrived at Stockholm about the end of January, 1787. The common route from Stockholm to Petersburg is across the Gulf of Bothnia to Abo in Finland, touching at the isles of Aland on the passage,—a journey performed over the ice in winter; but the season was so mild that the ice was too insecure to risk a passage, and no alternative remained but travelling round the gulf into Lapland, and thence through the whole extent of Finland to Petersburg, or staying at Stockholm till the passage to Abo was open. He did not long hesitate, but set out at once, alone and on foot, for Tornea, at the head of the Gulf of Bothnia, but a few miles south of the arctic circle, and thence he proceeded to Petersburg, where he arrived before the 20th of March, without money, and almost destitute of clothes. How he performed this surprising journey is not known, nor even the route which he took from Tornea; but, in a letter to Mr. Jefferson, he speaks of passing through the most unfrequented parts of Finland, from whence it is concluded that he did not follow the usual coast road to Abo. It is a most astonishing fact, that he was able to accomplish this formidable journey within seven weeks of the time of leaving Stockholm, making the average distance travelled about two hundred miles a week.

He had letters of introduction with him, and soon found friends at Petersburg, and, venturing to draw for twenty pounds on Sir Joseph Banks, was (for him) well supplied with money. Mr. William Brown, a Scotch physician, was proceeding to the province of Kolyvan, in the employment of the Empress. Ledyard joined him, and thus had a companion on his tour for more than three thousand miles. From this arrangement he enjoyed an important advantage, for Dr. Brown travelled at the expense of the Government; and, as Ledyard went with him by permission of the proper authority, his travelling charges were probably



defrayed—in part at least—from the public funds. The party left Petersburg on the 1st of June, and in six days arrived at Moscow, where they hired a person to go with them to Kazan, a distance of 550 miles, and drive their kibitka with three horses.

They staid a week at Kazan, and then commenced their journey to Tobolsk, where they arrived on the 11th of July, having crossed the Ural mountains, and passed the frontiers of Europe and Asia. The face of the country had hitherto been level, with hardly an eminence springing from the great plain which spreads over the vast territory from Moscow to Tobolsk. The ascent of the Ural mountains was so gradual as scarcely to form an exception to this general remark, and nothing could be more monotonous and dreary than the interminable wastes over which their route had led them since leaving Kazan, with here and there a miserable village, and unproductive culture of the soil. Tobolsk is a city of considerable interest, having been once the capital of all Siberia. It stands at the junction of two large rivers, the Tobol and Irtysh. It is a handsome, well-built town, and some good society is to be found there, as it is the chief place of residence for persons exiled for political offences; and, as has been *naïvely* remarked by Captain Cochrane, in his account of this place, "no government banishes fools." But, as it was the object of both our travellers to push on with the utmost expedition, they made but a short stay at Tobolsk, and proceeded forward to Bamaoul, the capital of the province of Kolyvan, where Dr. Brown was about to take up his residence. This place is, in many respects, one of the most agreeable places of residence in Siberia. The province, of which it is the capital, is a rich mining district, and this brings together in the town persons of science and respectability, who are employed as public officers to superintend the working of the mines. The surrounding country, moreover, is well suited to agriculture, abounding in good lands for pasture and grain, supporting vast herds of cattle, and producing vegetables in great profusion. In consequence of these bounties of nature, there is an overflowing and cheap market, an absence of want, and much positive happiness among the people. It is in the fifty-third degree of north latitude.

The following extract is from that part of Ledyard's journal which he wrote at Bamaoul:—

"The face of the country, from Petersburg to Kolyvan, is one continued plain. The soil, before arriving at Kazan, is very well cultivated; afterwards, cultivation gradually ceases. On the route to Kazan we saw large mounds of earth,—often of twenty, thirty, and forty feet elevation; which I conjectured, and on inquiry found, to be ancient sepulchres. There is an analogy between these and our own graves and the Egyptian pyramids; and an exact resemblance between these and those piles, supposed to be of monumental earth, which are found among some of the tribes of North America. We first saw Tartars before our arrival at Kazan; and also a woman with her nails painted red, like the Cochinchinese.

"Notwithstanding the modern introduction of linen into Russia, the garments of the peasantry still retain not only the form, but the manner of ornamenting them, which was practised when they wore skins. This resembles the Tartar mode of ornamenting, and is but a modification of the *wampum*\* ornament, which is still discernible, westward from Russia to Denmark, among the Finlanders, Laplanders, and Swedes. In the United States of America, as in Russia, we have made an effort to convert our Tartars to think and act like us: but to what effect? Among us, Sampson Occum was pushed the farthest within the pale of civilisation; but just as the sanguine divine, who brought him there, was forming the highest expectations he fled, and sought his own elysium in the bosom of his native forests. In Russia they have none so distinguished; here they are commonly footmen, or lackeys of some other kind. The Marquis de la Fayette had a young American Tartar of the Onandago tribe, who came to see him, and the Marquis at much expense equipped him in rich Indian dresses. After staying some time, he did as Occum did. When I was at school at Mount Ida [Dartmouth College], many Indians were there, most of whom gave some promise of being civilised, and some were sent forth to preach; but as far as I observed myself, and have been since informed, they all returned to the home and customs of their fathers, and followed the inclinations which nature had so deeply enstamped on their character."

\* The peculiar ornament of the North American Indians; it will be again mentioned hereafter. Ledyard's favourite theory was, that the North American Indians and Tartars were the same race, and he here adduces the *wampum* as an evidence of its correctness.

In a letter to Mr. Jefferson, written from Bamaoul on the 29th of July, 1787, he thus expresses himself:—

"How I have come thus far, and how I am to go still farther, is an enigma that I must disclose to you on some happier occasion. I shall never be able without seeing you in person, and perhaps not then, to inform you how universally and circumstantially the Tartars resemble the aborigines of America. They are the same people; the most ancient and the most numerous of any other; and had not a small sea divided them, they would all have been still known by the same name. The cloak of civilisation sits as ill upon them as upon our American Tartars. They have been a long time Tartars, and it will be a long time before they will be any other kind of people. I shall send this letter to Petersburg, to the care of Professor Pallas. He will transmit it to you, together with one for the Marquis\*, in the mail of the Count Ségur. My health is perfectly good; but notwithstanding the vigour of my body, my mind keeps the start of me, and I anticipate my future fate with the most lively ardour. Pity it is, that in such a career one should be subjected, like a horse, to the *beggarly impediments of sleep and hunger*."

It was arranged that he should travel from Bamaoul to Irkutsk, a distance of 1732 versts, or 1155 miles, three versts being equal to two miles, with the courier who carried the mail. This was another fortunate circumstance, and enabled the traveller to proceed much more rapidly than it would otherwise have been possible, and it appears that all the expenses were defrayed by the government. Between Bamaoul and Tomsk, the first halting-place, a distance of about 300 miles passed over in two days and three nights, the effects of the violent winds, which frequently desolate whole districts, were very perceptible. At Tomsk, a miserable town, the abode of the vilest and most wretched convicts, they were detained two or three days, but were hospitably entertained by the governor, a Frenchman. In ten days from the time of leaving Tomsk, they arrived in Irkutsk, over a road of which he speaks in no terms of commendation. From Tomsk to Yenesei the country exhibited rather an agreeable aspect and marks of cultivation, and in this region he first found the "real craggy peaked hill or mountain," and from Krasnojarsk to Irkutsk was the first stony road which he had passed over in the Russian dominions. The streets of Tobolsk, and some of the other towns on his route, were paved with wood.

From Irkutsk, where he was delayed for some days waiting for the post, he proceeded to the river Lena, and there embarking in a bateau, arrived at Yakutsk, after a fatiguing voyage of twenty-two days. When he left Irkutsk, it was just in the midst of harvest-time, and the reapers were in the fields; but, when he entered Yakutsk, the snow was six inches deep, and the boys were whipping their tops on the ice. Here his travels in prosecution of his favourite scheme were put an end to. Under pretence that the season was too far advanced, the governor at first threw difficulties in his way, and at length absolutely prevented him from proceeding. Ledyard made several unavailing attempts to proceed, as he believed, and truly, that the difficulties were exaggerated, but he was forced to give way, and occupied himself during his sojourn in inquiries upon the condition of the country and its inhabitants; holding ever before his eyes his favourite idea, that the Tartars and the North American Indians were the same race; he was also curious in his inquiries respecting the variation of colour in different races, and the causes of those variations, as he felt a strong desire to prove that these were caused by exterior circumstances, and not from an organic distinction. His notes on this subject are loose and undigested; and we cannot afford room for them at present. Whilst at Yakutsk he met with Captain Billings, the commander of a Russian expedition of discovery, and an old fellow companion in Cook's voyage. Billings had been assistant to Bayly the astronomer, attached to Cook's expedition, and had had the good fortune to be employed by the Empress Catherine in the exploration of the North-eastern regions of her territories. Billings was going up to Irkutsk, and, without any idea of the fate that awaited his friend, persuaded him to accompany him, merely to pass away the time in society. One evening Ledyard was suddenly arrested by the Russian police, acting under an order just received from the Empress; he was hurried into a kibitka, and carried as fast as post-horses could convey him to the frontiers of Poland, where he was coolly turned adrift, and told that it was at the risk of his life if he ever attempted to enter Russia again. At first sight such a proceeding, after the great facilities that had

\* The Marquis de la Fayette, who had shown Ledyard much attention at Paris.

been afforded to him in the earlier part of his journey, appears strange, but it is easily accounted for. When Ledyard obtained his passport and government protection the court was abroad, and occupied by amusements, and probably the Empress thought that by showing a trifling favour to an American, she would engage him in her service; and she was at that time extremely anxious to retain men of talent of any nation, and to spread abroad a good idea of her own administration; consequently, she considered it good policy to show favour to Ledyard, who was represented as a mere traveller, and from whom no harm was to be dreaded. The governor of Yakutsk must have known well that the views of Ledyard would, if realised, very much weaken the Russian power in Eastern Asia, and, at least, very much interfere with the establishments already made, and still extending, by which they then enjoyed a monopoly of the fur trade with the North-western American Indians. No wonder that he held Ledyard fast, till he could send home and get a ukase of banishment against our unfortunate traveller. Is it possible to conceive the feelings of a man, who, after triumphing over every difficulty, after penetrating from London to Yakutsk, one-half of the circumference of the globe, or nearly so, in the earnest pursuit of a purpose on which his mind was set; for the sake of which he had hazarded everything; for which he had suffered cold, hunger, and fatigue, when he found himself at length, after being trained on by flattering hopes, disappointed? Who that reads this narrative, and believes himself of sufficient spirit to have gone through what Ledyard suffered, would have borne up as he did?

He was turned adrift on the frontiers of Poland, without a penny, and commanded never to set foot again in Russia. He managed to raise five pounds on a draft on Sir Joseph Banks, and with these slender means contrived to reach London, where he arrived in the beginning of May, "disappointed, ragged, and penniless." He was received with great kindness by Sir Joseph Banks, who gave him a recommendation to the African Association, who were then seeking for a traveller willing to explore the interior of Africa, and, if possible, discover the source of the Niger. Ledyard at once acceded to the proposition, and, on being asked when he should be ready to set out, promptly replied, "To-morrow morning."

He left London on the 30th of June, and proceeded without accident to Cairo, but just as he was on the point of setting out with the caravan to Sennaar, he was attacked by illness, occasioned by exposure to the sun, and, notwithstanding the efforts of the best physicians at Cairo, he expired towards the end of November, 1788, in the thirty-eighth year of his age.

#### THE POOR MAN'S MAY.

SWEET MAY! they tell me thou art come:

Thou art not come to me;

I cannot spare a single hour,

Sweet May! to welcome thee.

God knows how hard I've worked this week,

To earn my children bread;

And see we have an empty board,—

My children are unfed.

And thou art still the same sweet May

My childhood loved so well.

When humming like a happy bee

Along some primrose dell,

I thought, oh! what a lovely world

Is this, dear God has given;

And wondered any one should seek

For any other heaven!

The hawthorn buds are come again,

And apple blossoms too;

And all the idle, happy birds

May sing the long day through.

The old green lane awakes once more,

And looks perhaps for me,

Alas! green lane, my heart may die—

I cannot come to thee.

From Poems by John and Mary Saunders.

#### THE STRUCTURE AND FUNCTIONS OF THE HUMAN FRAME.

##### SECOND ARTICLE.

THE lungs are only one of the organs whose primary office is the purification of the blood. There are other elements, besides carbon and hydrogen, which have a tendency to accumulate in it to excess, yet the lungs are capable of removing none but them. Moreover, the lungs alone would be unable to carry off the whole excess even of these two substances. Hence a necessity for other *excreting* organs,—that is, for organs whose function is to secrete from the blood, and carry out of the system, whatever, either by its noxious qualities or its superabundant quantity, tends to deteriorate the blood.

Azote is the basis of animal structure, to which it is indeed peculiar, not entering at all into the composition of vegetables. It has been mentioned that a quantity of this gas is absorbed into the blood at every inspiration, and the need of some apparatus to limit the amount retained in the system is therefore obvious. This office is performed by the *kidneys*, two glandular bodies, situated one on each side of the spine, and possessing a very complicated structure. The importance of these organs may be estimated from the fact, that about a thousand ounces of blood circulate through them every hour. The secretion of the kidneys consists of a large quantity of fluid derived from the aqueous constituents of the blood, and holding in solution a great variety of substances,—that peculiar to, and giving its name to the secretion, being *urea*, a highly animalised substance, the basis of which is azote.

The *skin* is an organ of great complexity and varied functions. It is composed of three layers,—the *cuticle* (or external skin), the *rete mucosum* (or mucous network), and the *cutis* (the true or internal skin). The cuticle is a thin, yet firm and strong, insensible membrane; the principal office of which is to diminish the force of external impressions; it also serves as a covering to the whole body, and confines and protects the soft tissues lying beneath. The rete mucosum connects the cuticle with the cutis, and is the seat of the colouring matter of the skin. The cutis is the chief part of the compound structure to which it belongs. It is composed of an infinite number of capillaries and nerves, of which, indeed, it wholly consists. These capillaries are the agents which perform the specific function of the skin,—the secretion and excretion of a large proportion of the superfluous hydrogen of the blood. Under ordinary circumstances, this element is removed by the skin in the form of an invisible vapour, which, when more abundantly evolved, condenses on the surface of the body. The former is called insensible, the latter sensible, *perspiration*. Along with these watery particles, and held in solution by them, a considerable number of other substances are conveyed out of the system. The quantity of matter excreted by the skin is exceedingly variable, depending chiefly on the degree of temperature to which the individual is exposed, which operates in this way by determining the distribution of the blood; great heat or exertion causing a large proportion of the entire mass of that fluid to flow into the cutaneous capillaries. In a state of health, insensible perspiration goes on uninterruptedly, and the average amount of this secretion in an adult has been estimated at from twenty to forty ounces in four-and-twenty hours.

The liver has been already mentioned as assisting in digestion by means of its secretion, the bile. We have now to show its uses as a depurating organ. The liver is the only organ in the body (if we except the lungs) whose secretion is formed from venous blood: the kidneys, the pancreas, the salivary glands, derive their respective products from arterial blood. Not so the liver. The

veins of the digestive organs, instead of returning the blood directly to the heart, unite to form a large vein, the *vena porta*, which ramifies throughout the liver, and furnishes the materials from which the bile is eliminated. The principal constituents of bile are carbon and hydrogen, so that, by this process, the blood sent to the liver is freed from a large portion of those elements, and prepared for being more completely purified in the lungs. The liver is therefore subsidiary to the proper organs of respiration, from which it differs chiefly in the mode by which it decarbonizes the blood.

Here may be mentioned the proper digestive function of the liver, by virtue of which it assists the stomach and other organs of digestion. Fluids, more especially fermented or spirituous liquors, are rapidly removed from the stomach by its capillary veins and absorbents, and are thus conveyed to the liver, to which, by similar means, are brought various products of the other organs, whose veins terminate there. Here these substances undergo a change, with the nature of which we are not acquainted, but which is doubtless a process of digestion, and are then transmitted with the blood into the heart and lungs. Hence it plainly appears that the liver is a digestive as well as an excreting and respiratory organ, being destined to operate upon substances on which the other digestive organs are not capable of acting. These various functions account for the great size of the liver, and its intimate connexion with the stomach, as well as for its extraordinary development in some of the lower classes of animals, as fishes and reptiles, whose respiratory system is simple and on a small scale.

The principal functions of the *intestines* are, as we have seen, the separation of the nutritious from the excrementitious parts of the food, and the removal of the latter. These are not all, however: the mucous lining of the intestines is thickly studded with glands, which secrete a large quantity of fluid, consisting of effete particles of every kind entering into the composition of the body, and which is ejected along with the excrementitious portions of the bile and aliment.

It frequently happens that more nutriment is formed than the system requires, and hence the blood becomes loaded with carbon and hydrogen. In such cases these elements combine, forming *st*, which is separated from the blood, and deposited, in various parts of the body, in the cellular tissue, by the capillary arteries of that tissue.

By the combined operation of these organs—the lungs, the kidneys, the skin, the liver, the intestines, and by the cellular tissue, the blood is maintained in the proper condition for the carrying on of its function with regularity and perfection. To this end they are all indispensable; and, although their activity varies with varying circumstances, and one or more may, for a time, take scarcely any part in this grand process, their inactivity being compensated for by the greater vigour of others, yet health is not compatible with the continued cessation of the function of any one of them. It is observable that more than one organ is provided for each of the matters excreted from the blood; the object of which arrangement is to prevent the serious evils which would arise from the temporary derangement of an organ of this kind, were there none to supply its place. Hence all the organs just enumerated are closely implicated with one another, all being affected, to a greater or less extent, by the condition of each. The practical consequences of this fact are of the highest importance, and will hereafter be pointed out.

The complicated and elaborate apparatus provided for the maintenance of organic life, especially as so much of it seems to produce no positive good, but merely to serve as preventives of evil, may, at first sight, appear to betoken imperfection in the

original constitution of the animal economy. The human frame is, doubtless, a structure far from simple, yet no part of it is superfluous. On the contrary, we find in it a wonderful economy of instruments; various and apparently independent effects being produced by one set of means and agencies, in a way which never fails to excite our admiration, by the display of profound wisdom and perfect control over the materials employed which such manifestations indicate. Some remarkable instances of this kind next claim our attention.

One of the essential characteristics of life is a *temperature* more or less elevated, independent of that of the media by which living beings are surrounded. A certain degree of heat, varying in different classes of organised bodies, is indispensable to the continuance of life, every deviation from it being either a cause or a consequence of disease, and, when it reaches beyond a given point, destructive of life. The production and regulation of this temperature are effected by the organs of organic life: so long as they are healthy and vigorous, the exact degree of heat required is kept up in the animal economy, in spite of the influence of external agents.

The sources of terrestrial heat are both numerous and diversified, yet "the discoveries of chemists have referred most of these to the general head of *chemical combination*. Thus, fire, or the combustion of inflammable bodies, is nothing more than a violent chemical action attending the combination of their ingredients with the oxygen of the air."

This brief quotation contains the explanation of the generation of animal heat. Carbon, an inflammable substance, the basis of coal, wood, &c., is continually entering into the blood, and as constantly being removed from it, by combining with oxygen. Here, then, are all the conditions necessary to the production of heat. Thus, the same process that purifies the blood also generates the vital heat, equally indispensable with the blood to organized existence: the accumulation of carbon in the blood is, therefore, not an evil,—not a circumstance indicative of imperfection,—but one absolutely essential to life, and a mark of beneficent design.

So far, the theory of animal heat is free from difficulty, but in other respects it is still, to some extent, unsettled,—that theory which appears most satisfactorily to account for all the observed phenomena involving several points in physiology which are yet matters of dispute. On this account, and as the subject does not bear directly on the object we have in view, we shall not enter upon it here, further than to quote the conclusion at which Dr. S. Smith arrives respecting the question. "The result of the whole is the complete establishment of the fact that the production of heat in the animal body is a chemical operation dependent on the combination of oxygen with carbon in the capillary arteries of the system,—that is, it is the result of the burning of charcoal at every point of the body."

Numerous experiments have decisively proved that this chemical process is greatly aided by the *vital* functions of the nervous system, which are, indeed, essential to its continuance. In what mode it is so, however, we are still ignorant: whether, as some suppose, by the electrical properties which they attribute to the nervous centres, or by the direct generation of heat, being undetermined.

One of the best ascertained laws of heat is its *tendency to equal distribution*. Now, since the media in which animals exist are liable to great and sudden variations of temperature, it might be supposed that the heat of animals would undergo corresponding changes. Such, however, is not the case. The natural heat of man remains, with little variation, the same in the hottest regions

\* Sir J. Herschell's Discourse on the Study of Natural Philosophy, p. 312.



of the tropics and in the midst of the ice-bound oceans around the poles: nay, even when exposed to artificially created temperatures, higher than any that are met with in the warmest climates. The processes by which this is accomplished, and which come under the denomination of those which *protect* the animal economy from external agents, are next to be considered.

It has been proved by experiment that the quantity of oxygen consumed by man diminishes in proportion as the temperature of the atmosphere rises: for, as the air *expands* in the same proportion, fewer particles of oxygen enter the lungs, and consequently less carbonic acid is formed; the excess of carbon not removed by respiration being, in such cases, secreted by the liver, as already explained. Here, then, is a direct provision for counteracting the effect of too high an external temperature, by limiting the amount of animal heat generated.

The influence of heat upon the distribution of the blood has been before alluded to, and this is another means for effecting the purpose under consideration. When an animal is removed into a higher temperature, the action of the heart is increased, the circulation is accelerated, and thus a larger quantity of blood is sent to the lungs and skin. In these organs, being acted upon by the heat, a portion of the watery constituents of the blood is converted into vapour and poured out on their surfaces, whence it is carried off by the surrounding air. Now, the change of a substance from a state of less to one of greater *rarity* occasions the absorption of caloric; the vapour or steam arising from boiling water, for instance, prevents it ever rising above a certain temperature, whatever degree of heat it may be subjected to. In like manner, evaporation from animals lowers their temperature by absorbing and carrying off the superabundant heat; and so effectual is this process that persons may remain for considerable periods in an atmosphere many degrees hotter than boiling water, without injury and almost without inconvenience! In such circumstances the loss of substance is, of course, very great; men engaged in gas-works, &c. frequently lose four or five pounds in weight in a short time.

Man is exposed to degrees of temperature as far below his own natural heat as those just referred to are above it. In the polar regions the temperature of the atmosphere is sometimes as low as forty or fifty degrees below zero, that is, 140 degrees lower than that of man, which latter is nevertheless maintained in spite of the constant radiation of heat from his body. It must be noted, however, that man could not long exist under such circumstances but for the assistance of art; he clothes himself in the thick furs with which the lower animals destined to inhabit such localities, are provided, and which, being bad conductors of heat, diminish greatly the loss of caloric. The natural provisions for enabling man to resist the influence of intense cold are principally, increased consumption of oxygen and production of carbonic acid, and diminution of evaporation. Cold contracts the capillaries on the surfaces of the body, and thus lessens the quantity of blood contained in them, and thereby, and by the direct influence of low temperature, evaporation is, to a great extent, prevented. It may be observed, also, that the food of animals living in cold climates is almost exclusively animal, which contains a larger proportion than vegetables of carbon and hydrogen—at least, of those elements in a state fit to enter into and form part of the body, which thus receives a more abundant supply of combustible matter than it would if vegetables were the chief articles of food.

Before concluding this exposition of the laws of organic life, we must briefly describe two sets of organs which exert a general influence upon that as well as upon the animal life, namely, the absorbent system and the organic nerves.

The absorbent system consists of lacteals, *lymphatics*, and a

peculiar class of glands, termed *conglobate*. Collectively, the office of those organs is, as the name denotes, to take up the various particles that come in contact with their extremities, and to convey them into the blood. The thoracic duct is the common termination of the whole absorbent system. The special functions of the lacteals have been already stated. The lymphatics are exceedingly minute vessels, closely resembling the lacteals in structure; they penetrate every part of the body, and are probably the sources of the absorbent power of the skin, and of the surface of several internal organs, by means of which substances placed upon them are speedily removed into the circulation. But the characteristic office of the lymphatics is, in conjunction with the capillaries, to build up and keep in repair the organs of the body. Pervading every tissue in countless numbers, they remove the worn-out particles from their various combinations, and thus prepare the receptacles in which the capillary arteries deposit the newly-formed particles, and hence they have been aptly termed the architects of the animal structure. On them is greatly dependent the condition of the entire frame. If they are too active, the body becomes emaciated and weakened; if insufficiently so, deposition proceeds too rapidly, and a plethoric state of the system is induced, and, at the same time, noxious particles are suffered to remain and accumulate.

Sensibility is generally regarded as an essential attribute of *nerves*. This, however, is an erroneous notion. The nervous system is composed of two parts, the *sentient*, of which the brain and spinal cord are the central masses, and the *organic*, which is not susceptible of sensation. The former presides over the functions of animal life; the latter over the processes by which vegetative existence is preserved. The organic nerves are developed before the sentient part of the nervous system, and consequently are originally independent of it; but afterwards these two systems unite and exert great mutual influence. Organic nerves take their rise in the abdomen and thorax, the cavities which contain the principal organs of the organic life, the great trunks of the arteries supplying which are completely enveloped in a complicated network of organic nerves, and filaments derived from which accompany all, even the minutest ramifications of the arteries, becoming larger and more numerous as the size of the arteries diminishes. Organic nerves are indispensable to the carrying on of all the processes of organic life: digestion, secretion, absorption, nutrition, would at once cease, but for their co-operation with the arterial capillaries. It is conjectured, and with much appearance of reason, that they perform their important part in the animal economy by means of the electric fluid, which they are supposed to convey to the capillaries, where it exerts a chemical influence on the blood. Numerous experiments have been made with a view to determine this question, but physiologists are not yet agreed respecting it. Be this as it may, it is certain that the functions of any organ are interrupted by the removal of its organic nerves, but may, for a time at least, be re-established by conveying a galvanic current to the organ affected.

We have thus completed a brief outline of so much of the organic life as is necessary for our purpose. Our readers will now be able to understand the principles on which the practical directions for the preservation of health, to be hereafter given, are founded, and to apply those general rules to their own individual cases, intelligently and beneficially. Health consists in the regular and natural performance of the functions of organic life, being influenced by the animal life merely through its action upon them. We have, therefore, given a far more full account of those functions, than it will be necessary to do with regard to the animal functions of locomotion and sensation. Our exposition is still necessarily imperfect; and those of our readers whom we may have succeeded in interesting in the subject, we refer for fuller information to Dr. Southwood Smith's work on "The Philosophy of Health," which contains a most complete and luminous exposition of every branch of the subject, and to which we take this opportunity of expressing our great obligations in the foregoing compendium.

## WELLS CATHEDRAL.

It is very remarkable that Wells Cathedral was finished in 1343, two years after the birth of Cimabue, the restorer of painting in Italy; and the work was going on at the same time that Nicolo Pisano, the Italian restorer of sculpture, exercised the art in his own country: it was also finished forty-six years before the Cathedral of Amiens, and thirty-six years before the Cathedral of Orvieto was begun; and it seems to be the first specimen of such magnificent and varied sculpture, united in a series of sacred history, that is to be found in Western Europe.—*Flaxman's Lectures on Sculpture.*

## FAST DRIVING.

"Coachman," said an outside passenger to one who was driving at a furious rate over one of the most mountainous roads in the north of England, "have you no consideration for our lives and limbs?"—"What are your lives and limbs to me," was the reply; "I am behind my time!"—*New York Mirror.*

## IPHIGENIA IN AULIS.

Rent on the earth her maiden veil she throws,  
That emulates the rose;  
And on the sad attendants rolling  
The trembling lustre of her dewy eyes,  
Their grief-impassioned souls contolling,  
That ennobled, modest grace,  
Which the mimic pencil tries  
In the imag'd form to trace,  
The breathing picture shows;  
And as, amidst her festal pleasures,  
Her father oft rejoiced to hear  
Her voice in soft mellifluous measures  
Warble the sprightly-fancied air—  
So now in act to speak the virgin stands;  
But when the third libation paid,  
She heard her father's dread commands  
Enjoining silence, she obey'd:  
And for her country's good,  
With patient, meek submissive mind  
To her hard fate resign'd,  
Pour'd out the rich stream of her blood.

*Potter's Æschylus.*

## A DUTCH ASSEMBLY.

An unfortunate Irishman known by the name of Lord Kerry, being the other night at one of the Dutch assemblies, and quite overcome with its stupidity, yawned so terribly that he fairly dislocated his jaw. It was immediately set again; but he has suffered much from the accident, and is still confined by it to his bed. He is a man upwards of fifty, and consequently, must have been frequently ennuied before. But such peculiar ennuis was more than he had bargained for, or had power to resist. You may think this is a made anecdote, but I assure you I have told you the plain matter of fact.—*Letter of M. G. Lewis.*

## FIRST INSTANCE OF BRIBERY IN THE HOUSE OF COMMONS.

1871 A. R. 13—May 10. Thomas Long, "a very simple man and unfit" to serve, is questioned how he came to be elected. He confesses that he gave the Mayor of Westbury and another four pounds for his place in Parliament. They are ordered to repay this sum, to appear to answer such things as should be objected against them in that house, and a fine of twenty pounds is to be assessed on the corporation and inhabitants of Westbury, for their scandalous attempt.—*Parry's Parliaments and Councils of England.*

## DISPROPORTIONED PUNISHMENTS.

Whenever the offence inspires less horror than the punishment, the rigour of the penal law is obliged to give way to the common feelings of mankind.—*Gibbon.*

## A NEGRO CHILD'S BURIAL.

A friend, who had resided some time in Brazil, told an anecdote, which was extremely pleasing to me, on account of the distinct and animating faith it implied. When walking on the beach, he overtook a negro woman, carrying a large tray upon her head. Thinking she had fruit or flowers to sell, he called to her to stop. On being asked what she had in her tray, she lowered the burthen upon the sand, and gently uncovered it. It was a dead negro babe, covered with a neat white robe, with a garland around its head, and a bunch of flowers in the little hands, that lay clasped upon its bosom. "Is this your child?" asked my friend. "It was mine a few days ago," she said; "but it is the Madonna's now, I am carrying it to the church to be buried. It is a little angel now." "How beautifully you have laid it out!" said the traveller. "Ah!" replied the negro, "that is nothing compared to the beautiful bright wings with which it is flying through heaven!"—*The Mother's Book.*

## THE TRIGGER FISH.

We were boarded by some little canoes, hOLLOWED from logs, when fully ten miles from the shore; nor did the poor fishermen in these frail vessels appear to feel any concern at the distance. From one of these boats we obtained some fish of an oval shape, of one to two pounds in weight and a deep blue colour, spotted all over with white. Sailors call them "trigger" fish, because their large back-fin cannot be pressed backward by a strong effort, but is levelled by the slightest touch on a smaller fin, planted a little below it.—*Voyage of the Brig Himnatch.*

## ANECDOTE OF KING JAMES I.

In the midst of the Spanish match, the king, who was at Theobalds, was much discomposed by missing some important papers which he had received respecting it. On recollection, he was persuaded that he had intrusted them to his old servant Gib, a Scotchman and gentleman of his bed-chamber. Gib on being called declared, humbly but firmly, that no such papers had ever been given to his care; on which the king, transported with rage, after much reviling, kicked him as he kneeled before him. "Sir," exclaimed Gib, instantly rising, "I have served you from my youth and you never found me unfaithful; I have not deserved this from you, nor can I live longer with you under this disgrace: fare ye well sir, I will never see your face more;" and he instantly took horse for London. No sooner was the circumstance known in the palace, than the papers were brought to the king by Endymion Porter, to whom he had given them. He asked for Gib, and being told he was gone, ordered them to post after him and bring him back; vowing that he would neither eat, drink, nor sleep till he saw him. And when he at length beheld him entering his chamber, he kneeled down and very earnestly begged his pardon; nor would he rise from this humble posture till he had in a manner compelled the confused and astonished Gib to pronounce the words of absolution.—*Miss Aikin's Memoirs of James I.*

## THE SONG OF THE LARK.

The Lark proclaimed the joys of the coming year, and awakened endless hopes, while she soared circling higher and higher, till, at length, her song was like the soft whisper of an angel holding converse with the spring, under the blue arch of heaven.—*The Story without an End.*

## WHO NEVER COMMEND BUT WITH A "BUT."

I knew a man who never heard any one praised but he damped the praise. He did praise, occasionally, but then it was to mortify the listener. If the listener praised, in turn, he would immediately change sides, and begin to censure the very person he had before eulogised. He went to church every Sunday; read the prayers audibly; sung with the clerk; would cry like a child in misfortune; and, in the course of an hour, sing a song to drive his care away. He never commended but with a "but." With him Naaman was an honourable man, and a mighty man of valour—but—he was a leper!—*Bucke's Book of Human Character.*

## CHEAP.

A tradesman in the country tendered an account in which was the following item; and, considering the job, his charge was certainly moderate:—"To hanging wickets and myself, seven hours, five shillings and sixpence."—*New York Mirror.*

## THE HONEY-BIRD.

In the country of the Amakasa wild honey is found plentifully, and the natives very frequently avail themselves of the assistance of the honey-bird, or bee-cuckoo, (*Cuculus Indicator*), in searching for it. This bird, which is of a cinereous colour, and somewhat larger than the common sparrow, is well known in South Africa for its extraordinary faculty of discovering the hives or nests of the wild bees, which in that country are constructed either in hollow trees, in crevices of the rocks, or in holes in the ground. Being extremely fond of honey, and of the bees' eggs, or larvae, and at the same time unable, without assistance, to obtain access to the bee-hives, nature has supplied the Indicator with the singular instinct of calling to its aid certain other animals, and especially man himself, to enable it to attain its object. This is a fact long ago established on the authority of Sparrman, Vaillant, and other scientific travellers in Southern Africa. With the habits of this curious bird I was myself acquainted during my residence in the interior of the Cape colony, and have often partaken of wild honey procured by its guidance. It usually sits in a tree by the way-side, and, when any passenger approaches, greets him with its peculiar cry of *cherr-a-cherr! cherr-a-cherr!* If he shows any disposition to attend to its call, it flies on before him in short flights, from tree to tree, till it leads him to the spot where it knows a bee-hive to be concealed. It then sits still and silent till he has extracted the honeycomb, of which it expects a portion as its share of the spoil; and this share the natives who profit by its guidance never fail to leave it. Some of the native Hottentots assert, also, that to obtain access to the hives in hollow trees, the honey-bird sometimes calls to its aid the woodpecker, a bird which finds in the larvae, or young bees, a treat as enticing to its taste as the honey is to that of its ingenious associate.—*African Sketches, by Thomas Pringle.*

## A FRIEND IN NEED IS A FRIEND INDEED.

When Drury-lane Theatre was burnt, Bannister the comedian was amongst the losers of property, as well as of situation. His wife was a relation of Rundle the goldsmith, who sent Bannister the following letter:—

"Ludgate-hill, 27 Feb. 1860.

"Dear Sir:—I have great pleasure in inclosing you a bank-note for 500*l.*, which I hope you will do me the favour to accept, in consideration of the loss you may sustain from the late serious change in the concern.

"I remain, dear sir, with the greatest regard for your welfare, your friend and humble servant,

"PHILIP RUNDLE."

"I presume there will be a subscription opened for those in distress."

*Bannister's Memoirs.*

London: WILLIAM SMITH, 113, Fleet Street. Edinburgh: FRASER & Co. Dublin: CURRY & Co.—Printed by Bradbury & Evans, Whitefriars.